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from the Commander

Maj. Gen. Julius Parker Jr.

The Official Military Personnel File (OMPF) is unquestionably one of the most important documents that the Army creates and maintains. It not only holds the key to the soldier's career progression; it also provides the critical insight to the Army on where that soldier can best be utilized. Therefore, its contents must remain current and accurate. As various Department of the Army selection boards have attested, such is not always the case. Despite the continuous efforts by the Total Army Personnel Agency (TAPA) and personnel managers in the field to emphasize the need for individual and command involvement in proper OMPF maintenance, DA selection boards continue to find problems in the OMPF records that often result in irrevocable damage to promising careers. Because of recent emphasis, the Military Intelligence (MI) Corps is doing considerably better in maintaining personnel records and documenting performance, but the fact that problems continue to exist at all dictates the need to raise the issue once again.

When DA selection boards review a soldier's file, the very first document they see is the official photograph of that soldier. It represents the soldier's initial handshake with the board. Too often however, the soldier's photograph leaves a negative and, hence, lasting impression of his qualifications for selection. Inadequate attention to detail regarding personal grooming (haircuts, moustaches), unkempt or ill-fitting uniforms, and incorrect accoutrement on the uniform continue to be noted by boards and usually reduce the soldier's chances for selection. A missing photo generally results in a soldier's nonselection because its absence conveys the impression that the individual has something to hide or is unconcerned about his career. Outdated photos (older than 3 years) can have the same effect by begging the question: Does the soldier care about his career or is he trying to hide something that would be revealed in a more current photograph?

Accurate documentation of a soldier's physical fitness is sometimes a problem. Boards continue to uncover instances in which the candidate's weight gains are accompanied by corresponding height increases in successive rating periods. Discrepancies also show up when rating officials certify that a soldier meets AR 600-9 weight standards and submitted figures and photographs suggest otherwise. Physical profiles are often inadequately explained, causing boards to wonder whether or not the profile truly impacts on performance or potential. The fact is, the Army is a physical business, with great importance placed on ensuring that our leaders-to-be are truly fit. Doubts raised by inaccurate or misleading documentation usually spell doom for potential selection.

Generally speaking, efficiency reports, both for officer and enlisted personnel, are showing improvement with respect to job descriptions and performance and potential ratings. But, here too, problems continue to surface. Selection boards often encounter duty descriptions that inadequately list specific job responsibilities and the scope of such responsibilities. This could be especially critical in career fields such as CMF 33, which contains comparably fewer traditional leadership positions (platoon sergeant, first sergeant) than the other enlisted MI career fields. In such cases, job descriptions that highlight the number of personnel supervised, dollars managed and equipment resources maintained are critical to ensuring that these soldiers receive full credit for their supervisory and leadership responsibilities. Weak or vague job titles, such as "test officer," "shift chief" or "morale and miscellaneous NCO," as well as undefined acronyms also "turn off" and confuse board members and hinder their judgment about the significance of the soldier's job and performance.

In the officer arena, a significant problem with efficiency reports is the senior rater who "gives away" his senior rater profile, i.e., who awards only the top two blocks to all rated officers. Senior raters who do so largely nullify the value and impact of their rating because they prevent the board from clearly determining the rated officer's worth and potential.

In addition to a soldier's appearance, physical fitness and demonstrated performance, selection boards also carefully evaluate a soldier's military and civilian education. Noncommissioned officer selection boards, for example, consider completion of professional development correspondence courses as well as college credits as important indicators of a soldier's competence and concern about his self-development. Soldiers whose records lack evidence particularly of military training and professional development education tend to convey a lack of interest in their profession and thus diminish their chances for selection.

While these OMPF deficiencies present potentially serious problems to successful career progression, the chain of

(Continued on page 47)

from the CSM

CSM Robert H. Retter

The Army has implemented a new Noncommissioned Officer Evaluation Report. You may not, however, be fully aware of the fact that this new report was developed with the full participation of the NCO leadership of the Army; and that many of the features of the new report derive from input from NCOs in the field. We said we wanted a report that better supported the professional development of the NCO. We indicated that we needed one which strengthened the relationship between rated soldiers and their raters. Lastly, but certainly not least important, we said we wanted a report which specifically focused on the duties, responsibilities and values expected of the noncommissioned officer.

We now have the NCO evaluation system we have asked for. It is remarkably different from reporting systems attempted in the past. We no longer have a report with a simple numerical rating where we can see at a glance whether a soldier was "nicked" before deciding whether to read deeper to find out why. We have expanded room in which to include full duty descriptions inclusive of significant extra duties. Examples of actual performance can now be supplied in bullet form without requiring a degree in English and constant retyping in order to fill the entire box with flowery prose. All of these are positive developments. The foundation of the entire system and its ultimate success rest squarely with the noncommissioned officer corps as raters, senior raters and teachers of those who rate and senior rate.

I have heard many comments about the statement that a 125 on the old system is equal to success on the new. Many question the suggestion that 125 being MAX on the old system means that EXCELLENCE must mean something better than perfect. To accept this position, we must believe that everyone who received a 125 on the old system was actually perfect. In truth, the old system had aged to the point that 125 meant performance above that level which would provoke a negative mark on the EER. Included in the population with an average score of 125 were many SUCCESSful soldiers, as well as a group of truly EXCELLENT soldiers. The old system tended to make it hard to tell the difference. Under the new NCOER, we should be able to see the difference. We should be able to clearly see specific examples of excellence, as well as appreciate and reward the successful soldier. A soldier who is SUCCESSful can be rated "Among the best" in potential in Part V of the new report. If SUCCESS wasn't meant to be enough, you couldn't do that.

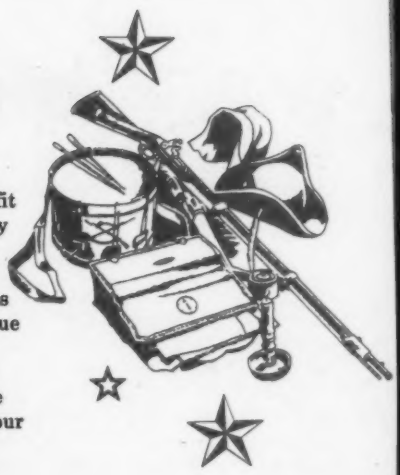
The secret to the success of the new system is frequent, required counseling and documentation that the counseling has occurred. Counseling equates to an actual meaningful exchange between raters and rated soldiers. Valid counseling is specific to individuals as well as to changing circumstances. When a counseling session is completed, both parties to the counseling should have a full understanding of the goals and objectives of the other; a full knowledge of how each individual's work fits into that goal; and an exact measure of the definition of "success" as stated on the NCOER. A valid counseling results in an exchange of views, opinions and information and concludes with an understanding. A valid counseling takes a little more time and effort. The rater must know the details of the subordinate's job and be able to define specific measures of success appropriate to it.

A degree of moral courage is required in order to speak forthrightly about noted deficiencies in a subordinate's performance or, on the part of the rated soldier, in probing for understanding of a superior's definition of success.

I don't mean to imply that the counseling sessions are negotiating sessions, but there should be a full understanding, if not agreement, at the conclusion of the session. Later counseling sessions should relate to an individual's earlier counseling. Both parties to the evaluation and related counseling sessions should be able to discuss specifics in the measurement of success during the period in question. If the new system is going to work, we simply must take the time to formally sit down and "talk shop" frequently and fully. We must know and understand each other and how each individual's set of circumstances relates to mission accomplishment.

We can and must try to make the system work.

Behind the Lines



Military Intelligence has enjoyed continued readership since its inception in 1974. Units worldwide have always had the opportunity to receive as many free issues as they desired — up until now.

Severe budget constraints have caused the staff of ***Military Intelligence*** to drastically curtail distribution. The victims of this necessary action are the MI soldiers stationed in those worldwide units. It seems that those who would benefit most from the information contained in this bulletin will now never see it, if they depend on unit distribution. There is, of course, an action that units can take to ensure they receive as many copies as they desire.

Units are still entitled to one free copy of the bulletin and they can purchase as many extra copies as they need by using unit funds. The current cost for one issue to be delivered four times a year is $6.50 domestic (including APO and FPO addresses) and $8.15 foreign. Thus, if your unit desires five copies (one free and four paid subscriptions), the cost will be $26.00 per year. Paid subscription is the only method of ensuring that the bulletin will continue to be published. Show your support by helping to keep your bulletin in operation.

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feedback . . .

Dear Editor:

Your magazine is read with great interest over here "Down Under." It is always informative and certainly well produced. However, I must correct an error in the article, "Intelligence and Deception Factors in the Battles of El Alamein," which appeared in the January 1988 edition. The assault on Tel el Eisa, which resulted in the capture of the German signal intercept station, was carried out by Australian troops, not Canadian. The renowned 2/48th Battalion of the Australian 9th Division won the day with a bayonet charge and should be acknowledged as the victors. Did the Canadians fight in the Western Desert?

Maj. N. R. Watson
Australian Intelligence Corps
Canungra, QLD

Dear Editor:

The article, "R× for Target Value Analysis," by Maj. Philip J. Millis, published in the April issue of ***Military Intelligence****, is basically sound. However, the author is mistaken in a few areas.*

Millis raises several complaints. The first is the size of the Fire Support Mission Area Analysis (FSMAA). His first solution is only partially valid for two reasons: First, the document issued from Fort Sill, Okla., is only Chapter 3 (TVA) of the FSMAA. Second, the reissue recommended would entail reducing the size of the manual by slightly less than one-third. The marginal utility of this change would hardly be worth the cost incurred.

The second recommended solution is currently under study by several Army agencies, particularly the Army Development and Employment Agency at Fort Lewis, Wash. These agencies plan to incorporate the results of target value analysis into the Automated Distributed Intelligence Systems being developed by the Pacific Northwest Laboratory.

The second complaint deals with the classification of the FSMAA. The manual specifically states that the products (target spread sheets and target sheets) as a whole are classified and individual parts of the product may not be classified. However, the author's point is valid and the classification of the TVA products in the FSMAA should be reevaluated.

The next complaint deals with the inflexibility of target spread sheets. Field Circular 6-20-10, ***Fire Support Targeting****, goes into some detail on TVA developed targeting tools and states that, "Target spread sheets have the greatest utility as a guide to commanders and their staffs." Far from being inflexible, target spread sheets serve as a starting point from which the commander and staff may develop the high value and high payoff targets for their operations.*

The final complaint deals with a lack of prioritization guidance. The author tries to second-guess what the FSMAA developer tried to convey by using different typefaces. The FSMAA and Field Circular 6-20-10 both address the different typestyles of the attack rationale column, "The targets will give the greatest benefit if attacked in the sequence indicated by order of the descriptions." In other words, engaging target type A, followed by target type B and then target type C, as they are sequentially listed from the top of the page, will maximize the friendly benefit.

Capt. Henry W. Embleton
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Fort Huachuca, Ariz.

(Detach here)

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"More than any other discipline, I believe WARFIGHTER challenges our guys out front. If we do our work right, our adversaries may be just a little bit surprised to see how well prepared we really are."

WARFIGHTER Exercises

The Battle Command Training Program

An Introduction by Col. Worth A. Sweet

The battle command training program's (BCTP) WARFIGHTER exercises constitute the best initiative for training commanders and staffs at divisions and corps since Gen. George Washington first called "fall in."

In January 1988, I Corps, in conjunction with the 9th Infantry Division (ID) (Motorized (MTZ)), conducted the first of many WARFIGHTER exercises to come. Using the experiences of the 201st Military Intelligence (MI) Brigade, the 109th MI Battalion and the respective offices of the G2, I Corps and 9th ID (MTZ), these articles will focus on the many aspects of the BCTP's WARFIGHTER program — especially as they relate to the MI community.

More than any other discipline, I believe WARFIGHTER challenges our guys out front. If we do our work right, our adversaries may be just a little bit surprised to see how well prepared we really are.

After you finish these articles, which are written from the perspective of the intelligence and electronic warfare (IEW) soldiers and officers at both Division and Corps level, I think you will believe along with myself that the BCTP WARFIGHTER program is one of the finest opportunities to come along in a long time for putting all of the IEW battlefield concepts to the test and seeing if they really work. I'll tell you that as far as I Corps and the 9th ID (MTZ) are concerned, they really do!

WARFIGHTER, an IEW Opportunity

by Lt. Col. Daniel J. Skeldon and Maj. William D. Gibson III

One of the earliest and most enduring lessons learned from the National Training Center (NTC) is the need for task force commanders and staffs to exercise directing a whole battalion under tactical conditions. They do not have an opportunity to do so in daily garrison operations. As an extension of this lesson learned, the Army has developed an Army Training and Evaluation Program (ARTEP) for division and corps. The Combined Arms Center at Fort Leavenworth, Kan., will administer these ARTEPs using a newly developed Army Mission Training Plan (AMTP 71-100) during a series of WARFIGHTER Command Post Exercises (CPXs).

The WARFIGHTER exercise, conducted in January 1988 by the 9th ID (MTZ), culminated a six-month training program initiated by Maj. Gen. Shalikashvili when he took command in June 1987. During the training, the commanding general (CG) melded his senior commanders and primary staff into an effective team to coordinate the Division's combat, combat support and combat service support assets. The IEW community was a critical member of this team. To fight WARFIGHTER, Shalikashvili had to synchronize his command's operating systems based on an accurate knowledge of the enemy, weather and terrain. However, in WARFIGHTER, unlike some major CPXs, opposing forces (OPFOR) were not training aids, restricted to a scenario set in concrete to ensure that a series of

exercise objectives were achieved. To win, the CG had to effectively employ his division. To do that, he needed good, timely intelligence support. Just as importantly, he needed to trust his IEW community enough to base "bet-your-command" decisions on its products.

Training Program

The training program included three complementary activities: On-site tactical seminars, a BCTP seminar at Fort Leavenworth and CPXs. Additionally, the Division actively participated in the development of the AMTP for Division Headquarters by providing a team of staff personnel (including G2) to assist in revising the original coordinating draft.

The on-site tactical seminars were structured to give the division command group, major subordinate commanders, separate battalion commanders and primary staff an opportunity to develop an appreciation of the capabilities and limitations of a motorized infantry division. By having commanders and staff discuss their theories of fighting and supporting, all the Division's "prime movers" gained an understanding of tactical requirements and how to provide combat and combat service support. For instance, in the IEW arena the topics included intelligence preparation of the battlefight (IPB) at various echelons; collection management; and IEW organization, structure and support to the Division. The trip to Fort Leavenworth included the tactical seminar participants and the Division's battle staff.

The BCTP seminar is a decision making exercise. Early in the morning the battle staff received raw information from the BCTP cadre. Data was reviewed and a situation briefing prepared. The CG and assembled dignitaries were briefed, then a corps operations order was received. The Division players then went through the military decision making process under the watchful eyes of Leavenworth subject matter experts, who provided after action review (AAR) comments. While the battle staff was preparing staff estimates, courses of action briefings and (later) turning the CG's decision into an order, the senior officers participated in tactical seminars. Each functional area officer was asked to lead a seminar in his area of expertise. This included the G2, who presented topics and led discussions of intelligence matters which were considered to be of greatest need and highest interest to the 9th ID commanders and principal staff officers. It was a true opportunity for all the key players to become more familiar with the total functioning of the Division and to meld a knowledgeable team. Another major benefit was the effect of this planning process on the battle staff. Developing a daily situation briefing, combined staff estimate, courses of action briefing and an operations order that can be input into the BCTP computer requires teamwork. Doing it when the staff is locked in a small classroom, with very limited time, and always in the view of the command group, primary staff, commanders and various VIPs adds an extra dimension to teamwork. The battle staff learned to work together by identifying each others' strengths and weaknesses and making adjustments. The sections also learned who needed and who could provide information. For example, the Division transportation officer and G4 plans officer were more interested in the G2's lines of communications and combined obstacles overlays than G3 operations. No other WARFIGHTER training had as beneficial an impact on Division main (DMAIN) operations as the BCTP seminar.

Finally, to put it all together, the Division participated in three major CPXs, two Division-level and one Corps-level. CABER HARVEST (August 1987) primarily gave the CG a chance to become familiar with his motorized Division, its tactics and capabilities. G2 objectives were to improve collection management and reporting and to work on analytical skills. The Division in general, and the IEW community in particular, showed improvement over previous performance. However, there were a number of procedures the CG wanted to exercise prior to the Corps exercise in December and WARFIGHTER in January. So CABER IRON was scheduled for November.

During CABER IRON, the Division worked at resolving problems identified during CABER HARVEST, the tactical seminars and the BCTP seminar. The scenario had the division fighting in the sector and against the enemy it would face on WARFIGHTER, so IEW soldiers received excellent training in useful IPB, order of battle (OB) and analytical skills. Communications between G2 elements and 109th MI Bat-

"By having commanders and staff discuss their theories of fighting and supporting, all the Division's 'prime movers' gained an understanding of tactical requirements and how to provide combat and combat service support."

talion elements were a real problem on this exercise. The experience gained from trying to fix or work around the problems was very valuable on both CASCADE PEAK IV and WARFIGHTER.

CASCADE PEAK IV was an I Corps exercise and the Corps had its own exercise objectives. However, the scenario was in the same general geographical vicinity as WARFIGHTER and the Joint Exercise Support System (JESS) was used as the computer driver on both exercises. Furthermore, the BCTP cadre was present to gain experience by observing the control procedures used in the exercise. Both Corps and Division regarded CASCADE PEAK as a dress rehearsal. Instead of deploying just to support Corps, the Division was a vital part of the exercise. The IEW community had to interact and coordinate with Corps and adjacent divisions, and the IEW soldiers had to perform their jobs at a steady pace that proved very beneficial from a training standpoint. Corps and BCTP cadre learned that they had to augment JESS with numerous IEW scripters to provide a realistic enemy scenario. Based on experience from CABER HARVEST, CABER IRON and previous Division-level exercises, the Division was able to provide expert knowledge on the organization, functioning and mechanics of running an off-line exercise control center. In this way, the Division was able to orchestrate the rhythm of the subsequent WARFIGHTER exercise.

"When BCTP was over and the final AAR conducted, we discovered that the 109th had completed some of the best training we had ever experienced."

Conducting three major exercises in four months was a major investment in time, personnel and resources. However, at the end of the CPXs, tactical seminars and BCTP seminar, the CG had a command that knew how to operate together; a staff he trusted to obtain required information he needed to make and implement his decisions; and soldiers who were trained at their tactical jobs.

As the division trained, the CG and other decision makers learned the capabilities and limitations of the IEW tools. But they also saw the Division's IEW soldiers performing their duties professionally and enthusiastically in the bone-chilling cold and wet of a Fort Lewis winter. They learned to trust that the soldiers would make the IEW system work effectively.

WARFIGHTER is not just another exercise. It is designed to put a Division or Corps under the same stress a task force faces at the NTC. And, as at the NTC, there are many observers/controllers who provide frank AARs and who lead discussions on how close the division comes to meeting standards listed in the new division AMTP.

If units prepare for it, WARFIGHTER can be an unparalleled training opportunity. Just as importantly for G2s and MI commanders, the exercise presents an opportunity for their IEW soldiers to perform their critical roles under realistic conditions and to keep MI **"ALWAYS OUT FRONT."**

WARFIGHTER Exercises

BCTP: A Fresh Challenge for the MI Battalion

by Lt. Col. Lanning M. Porter

The BTCP is designed to train division and corps commanders to execute their Mission Essential Task List in a joint and combined setting. The 109th MI Battalion commander, his staff, officer and noncommissioned officer leaders and soldiers at all levels play a key role in BCTP and, in the process, obtain a number of challenging and meaningful training opportunities.

The 9th ID (MTZ) BCTP was conducted in two phases. For phase one, the Division commander took his battle staff and major subordinate commanders to Fort Leavenworth, Kan., where they participated in a week-long warfighting seminar. The seminar consisted of several scenarios and decision making drills that required the commander to issue guidance to his staff, who then went through the traditional staff esti-

mate process. While the staff put together its estimate and prepared to present courses of action, the CG and major subordinate command (MSC) commanders convened to discuss and wargame each situation and analyze the "what-ifs" that might cause modifications to the CG's guidance and the anticipated staff estimates. The division staff members then presented their estimates and the CG made his decision based on their recommendations. The CG's course of action and associated orders were fed into the CORBAN computer which then played our forces against an OPFOR that also had submitted its own plan. The outcome was briefed and discussed in detail. The Fort Leavenworth BCTP staff later conducted several AARs during which additional lessons learned were discussed. The major benefit to all participants was that the battle staff became more rapid, expert and proficient at formulating courses of action and estimates that were in agreement with the CG's thinking.

During these wargaming sessions, the MI Battalion commander had plenty of opportunity to introduce IEW considerations along with considerations presented by commanders responsible for maneuver, fires, engineer, signal, air defense and combat service support. The CG, his battle staff and the MSC commanders became a tightly knit team able to make rapid, well-thought plans. We became increasingly able to marshal resources, sequence activities and synchronize combat power. IEW was worked into every plan and became a significant factor in each of the situations presented and fought.

Phase two of BCTP was a WARFIGHTER CPX conducted at Fort Lewis. The Division headquarters and all the MSC headquarters, including the MI Battalion, deployed to the field for this nine-day exercise.

The CPX was conducted using the JESS computer model. Since JESS does not include intelligence or electronic warfare play, all IEW play had to be accomplished by hand and fed into the JESS computer for IEW effects to be seen by the players. The Division G2 and the 109th MI Battalion mounted a huge effort to ensure that realistic IEW play would occur and that it would be timely and accurate. Selected MI soldiers were identified as scripters and began the tremendous task of putting together a near-real electronic OB for the four enemy corps and subordinate units we would face in the exercise. The Battalion's technical control and analysis element (TCAE) soldiers began work on the training and technical aids they would need to sort out and locate enemy emitters — both on the ground and in the electromagnetic spectrum. Company commanders and platoon leaders were selected as controllers. They began an intense study of the planned operation and the intelligence flow required to satisfy the Division staff's needs. Intelligence and electronic warfare support officers (IEWSOs), already habitually associated with the Division and maneuver brigade headquarters, began work on the offensive EW requirements of their respective commanders. The Battalion commander and his staff started to work through the complicated problems of inserting IEW into the overall exercise play and ensuring that it matched the battle being fought in the JESS computer. Changes in the Division's intelligence communications structure posed special challenges for the Battalion communications and electronics officer (CEO).

When BCTP was over and the final AAR conducted, we discovered that the 109th had completed some of the best training we had ever experienced. Nearly every soldier in the Battalion was involved. Commanders and staff learned a great deal about command and control of Battalion assets. IEWSOs practiced the all-important liaison function to perfection. Scripters had learned to fight their respective sensors and report just as they would have to do in the field. In the CPX environment they discovered how they fit into a much larger IEW picture. TCAE soldiers practiced their collection and analytical skills and by the end of the exercise had gleaned over 90 percent of the enemy electronic OB. Communicators had performed excellently. Intelligence flow was superb. Offensive EW was effective and proved to be a significant combat multiplier throughout the exercise. BCTP was a tremendously challenging and rewarding training experience that can impact on every MI (CEWI) battalion in the Army.

WARFIGHTER Exercises

109th MI Battalion BCTP Participation

by Capt. Steven Loving

The 109th MI Battalion was primarily responsible for generating the intelligence flow that drove the BCTP and, using EW, disrupting enemy operations. A Master Events List (MEL) was not used during the exercise. The Battalion would not have had the opportunity to perform analysis if an MEL had been used. The challenge for the Battalion was to generate the required intelligence flow and devise a means to train the staff and the TCAE in the art of EW. The system developed by the Battalion has been used in several CPXs and accomplishes both objectives.

The January BCTP depicted motorized operations in a Korean scenario. Motorized operations are characterized by rapid movement and extended areas of operations, and the Korean terrain made this extremely challenging. The challenge for the Battalion was to rapidly deploy and move organic and attached IEW assets to provide IEW support to the maneuver units. The Battalion also supported passage of lines, airmobile operations and river crossings. Each type of operation posed different problems for the Battalion, as well as the maneuver commanders. Logistic and administrative issues were also addressed.

The Battalion operations center (BOC) and the TCAE deployed to field locations with other Brigade and Separate Battalion tactical operations centers (TOCs). The Battalion also deployed a scripting cell for the exercise. The purpose of the scripting cell was to simulate and pass information to include technical data from sensors in MI com-

panies supporting maneuver brigades. The TCAE received training by performing their analysis and passing information to the G2 all-source production section (ASPS). Combat information was passed directly to the maneuver brigades via an FM voice link between the scripting cell and the IEWSOs at each brigade.

The scripting system was successful in generating the required intelligence and EW flow to drive the exercise and provided a training mechanism for assigned analysts. Soldiers designated to work as scripters also received training on the systems they were scripting. Scripters were forced to consider system parameters and capabilities, limitations and terrain considerations. Some of the analysts were also assigned to script Corps and Echelons above Corps (EAC) assets.

The BCTP exercise has some limitations. There are no MI assets or units programmed into the JESS system. This lack of MI unit designators in the computer simulation causes some unrealistic "hand jammed" movement and does not exercise the Battalions' administration and logistics systems as thoroughly as units programmed into JESS. Another disadvantage is that MI units aren't "killed" by the system. Any kills, logistic requirements and personnel replacements were hand generated offline by controllers. Electronic warfare support measures (ESM) and electronic countermeasures (ECM) are also judgment calls by the scripters. To permit realistic EW play, however, the Battalion was able to coordinate with the controllers so that a unit's computer driven combat power was degraded as a result of ECM. These computer deficiencies were reported to the exercise directors and improvements are being considered for JESS. The Battalion was able to overcome many of these deficiencies by dedicating extra manpower to the game. The additional personnel requirements strained the Battalion, but the strain was offset by the training benefits.

WARFIGHTER Exercises

TCAE Training Results

by WO1 Gregg C. Brown

An MI battalion's TCAE is the asset manager for the battalion's EW/signals intelligence (SIGINT) resources, whether those resources are organic or augmented.

Mission

In the 109th MI Battalion, the TCAE receives from the division G2 priority intelligence requirements/information requirements (PIR/IR) and, using them as a guide, provides tasking to its general support company and supplementary tasking to its direct support companies. (The direct support companies receive their primary taskings from the supported brigade.) The TCAE also performs transcription, translation and analysis functions on information received from its collection assets. The intelligence derived from analysis along with any time-sensitive combat information are reported to the Division G2 via secure communications. The TCAE also builds and maintains an intelligence data base. It uses this data base to provide technical data to its collection assets (ESM) and ECM sections and as a basis for in-depth analysis. ESM and ECM tasking is also the TCAE's responsibility.

The TCAE is broken down into four sections: Collection management, communications intelligence (COMINT) analysis, electronic intelligence (ELINT) analysis and ECM mission management. The collection management section is responsible for planning and tasking all collection missions for the battalion. This is where the division's PIR/IR are translated into collection missions. Tasking messages are written and transmitted to collectors, and collection assets are tactically positioned on the ground for optimum coverage of currently tasked missions.

The COMINT section is responsible for analyzing incoming message traffic, building and maintaining the technical data base, providing technical data to the collectors and/or the ECM section and preparing Tactical Reports (TACREPs) and other applicable intelligence reports for transmission to division G2.

The ELINT analysis section processes, analyzes and reports on all collected ELINT. It is also responsible for ELINT tasking and works closely with the COMINT analysis section preparing fused reporting when possible.

The ECM mission management section, after receiving jamming requests from the division G2/G3, plans and tasks the ECM (jamming) missions for the general support company. It also receives tip-offs of jamming missions tasked by the brigade commanders to the direct support companies. Finally, this section receives reports from the jammers on the results of their missions. The section prepares and forwards jamming effectiveness reports to division G2/G3.

During WARFIGHTER, no collection assets actually deployed. All intercept was provided by a scripting cell. After the scripted intercept was received, the TCAE functioned as it normally would. All reporting was done via a secure FM net using the Digital Communications Terminal (DCT) between the TCAE and the division G2. A teletype terminal was also available for any necessary Special Intelligence reporting, since the FM net was only cleared for collateral traffic.

Data base management was handled by a MICROFIX computer using a traffic analysis program obtained from the National Security Agency. Although taking a computer to the field does have its drawbacks, we found the advantages (speed, accuracy, ease of information retrieval, etc.) far outweighed the disadvantages.

In addition to our computer-made net diagrams, we used a variation of the traditional net diagram, dubbed a "starburst" chart, as a visual working aid to correlate ground OB with electronic OB. With the starburst, the control station is drawn in the middle of the page with its outstations radiating out from it like the spokes of a wheel. Additional outstations can be added to already

existing outstations in a chain-like manner. This type of net diagram makes more efficient use of available work space and is also easier to read, especially for briefing non-SIGINT personnel.

Lessons Learned

We found that automating our database expedited our workflow and made term analysis quicker and more accurate. The starburst was also a positive innovation. On the negative side, we discovered that we needed to pay more attention to target value analysis in order to make better use of our assets. Additionally, we learned that the physical setup of the TCAE work area needed improvement.

This exercise was a remarkable training opportunity for our TCAE. The training and experience derived has definitely increased our ability to provide the tactical commander with the IEW support to be successful. We look forward to the next WARFIGHTER so that we can further "fine tune" our daily operations.

WARFIGHTER Exercises

The EW Planning Cycle

by Capt. Philip D. Jakielski

In terms of the EW planning and operations cycle, the WARFIGHTER exercise provided the opportunity for brigade intelligence and electronic warfare support elements (IEWSEs) to exercise the planning and coordination processes necessary to integrate, synchronize and sustain effective EW support into brigade operations as part of the Division's total EW effort.

In addition to the requirements spelled out in Field Manual 34-10, *Division Intelligence and Electronic Warfare Operations*, a brigade IEWSE in the 9th ID has additional responsibilities because of the unique organization and operational concept of the Division's MI Battalion.

As opposed to the traditional CEWI battalion where companies are organized by specific mission — collection and jamming (C&J), intelligence and exploitation, EW — and then task organized into company teams to provide general support to division operations or, in certain cases, direct support to a brigade, the 109th MI Battalion's forward support companies (FSCs) contain an organic mix of IEW capabilities and habitually provide direct support IEW to the maneuver brigade. (Normally, the surveillance assets of an FSC will work for the brigade S2, either directly under his control or task organized down to the battalion S2s. The EW assets of the FSC are directed by the brigade S3.) Because the FSC passes COMINT through technical channels to the TCAE, it still contributes to the division's collection effort. In cases where the brigade it supports is given a reserve or rear battle mission, the FSC will be put in direct support of another committed brigade, reinforce another FSC or provide general support to the division.

It is because of the FSC's direct support relationship to brigades that an IEWSE has to take a more proactive role in integrating EW into brigade operations than might be done under more traditional company team configuration. Unlike the traditional CEWI battalion where the company team receives its SIGINT and EW taskings from the MI battalion S3 via the TCAE, the FSC receives its taskings directly from the brigade IEWSE. (The TCAE provides the ESM requirements and the technical data necessary to execute the tasking.) The brigade IEWSE, therefore, is the focal point for all EW support provided by the FSC to the brigade. After thoroughly integrating EW operations into the brigade's scheme of maneuver and fire support plan, the IEWSE relays specific ECM tasks to the FSC operations center. Since the IEWSE tasks the FSC, the IEWSE must pro-

"We found that automating our data base expedited our workflow and made term analysis quicker and more accurate . . . . This exercise was a remarkable training opportunity for our TCAE."

duce EW estimates for the staff planning process and EW annexes for brigade orders. The IEWSE must also develop an EW target list and a restricted frequency list for the brigade. Additionally, the brigade IEWSE in the 9th ID integrates the battlefield deception provided by the 109th's deception detachment into brigade operations.

Before the 9th ID's Cavalry Brigade (Air Attack) began planning its operations, the IEWSE carefully analyzed the Division OPORD, studied the Division EW Annex and reviewed the 109th's OPORD. The EW Annex, perhaps the most important source of information from the Division, identified major enemy elements exercising command and control and provided information on enemy electronic and radio electronic combat resources and their employment. The annex also identified the Division's EW mission and explained the concept for accomplishing that mission, assigned specific EW tasks and assets to complete those tasks, and provided a Division composite EW target list and a restricted frequency list. Finally, the 109th OPORD explained the MI Battalion commander's plan for supporting the Division mission. The critical elements of the IEWSE's estimate and annex came from analysis of the Cavalry Brigade's mission, the Brigade commander's intent, the concept of the operation and scheme of maneuver, the fire support plan and the Brigade's information requirements.

The Cavalry Brigade was prepared to execute and support rear area operations; to air insert division elements to seize critical objectives within the Division zone; and to conduct a passage of lines and execute an exploitation in zone to a limit of advance. Under the Division OPORD, the cavalry squadron was task organized in support of one of the lead infantry brigades as its covering force. The motorized infantry battalion became part of Division troops and was assigned the rear battle mission. The Brigade commander's intent for this mission was to carefully plan for the on-order airmobile operation while preparing to become the Division's main effort if one of the lead elements stalled.

Knowing the Brigade's mission, understanding the commander's intent, and using information from the Division and MI Battalion OPORDs, the IEWSE began the staff planning and coordination processes that would result in a comprehensive staff estimate for the Brigade commander. With the Brigade's primary focus on the on-order airmobile operation, the IEWSE concentrated its efforts on developing the EW portion of suppression of enemy air defenses (SEAD) packages that would accompany any airmobile operations in the Division area.

Because of the Brigade's mission, there were no EW assets initially task organized to provide direct support. Therefore, the IEWSE had to request Division, Corps and EAC augmentation for SEAD operations from the Division EW officer. They also suggested that Guardrail and Quicklook missions, flown in conjunction with close air or reconnaissance missions, collect critical ELINT and COMINT associated with the enemy's air defense artillery fire control and command and control radars and radio nets. Additionally, since the Division IEWSE was acting as the Division deception cell as well, the Cavalry Brigade IEWSE requested deception support from the MI Battalion's deception detachment to present the enemy with false pick up zones in order to disrupt his ability to interdict the airmobile operation while it was still on the ground. Finally, the IEWSE requested Division, Corps and EAC EW assets be task organized to the Cavalry Brigade in the event that it become one of the Division's lead brigades. The integration of EW assets into the airmobile operations would be critical to the success of the Brigade's mission.

Later, the Cavalry Brigade's mission changed. It was going to attack in zone and seize critical objectives near the limit of advance. To help accomplish the mission, a mechanized battalion and an armor battalion were added to the Brigade's combat team. Along with the added combat power, an FSC was task organized to the Brigade. With an FSC now in direct support of the Brigade, the IEWSE, after coordination with the Brigade S2, S3, fire support officer and CEO, assigned specific EW tasks, provided EW target lists and developed a Brigade restricted frequency list. After an EW plan was developed it was disseminated to the FSC for execution with information copies sent to the MI BOC and TCAE.

As the battle unfolded, the status of mission taskings for the FSC was maintained and updated based on changes in the situation. Potential targets were identified, EW taskings were preplanned

"When planning communications for an exercise like WARFIGHTER, the first step is determining the required flow of communications. It is necessary to determine what assets will be used and to prepare them well in advance."

and locations for assets were coordinated with the S3. Taskings and coordinated asset locations were passed to the FSC operations center. As missions were completed, effectiveness reports were passed back to the IEWSE and, in turn, reported to the Division electronic warfare support element. Situation updates were passed to both the FSC operations center and the MI Battalion TCAE, and locations of all FSC assets were plotted for control purposes, including surveillance assets which were task organized to battalions.

These activities illustrate the value of the BCTP in exercising the EW planning cycle at brigade (and division) level. The WARFIGHTER exercise also evaluated the IEWSE's ability to plan, coordinate, direct and monitor the IEW effort in support of brigade operations. It forced the IEWSE to make critical decisions regarding the employment of EW resources within the brigade area. Additionally, detailed estimates and annexes had to be prepared after coordination with the brigade S2, S3 and FSO to establish ESM/ECM priorities for EW assets. Requests for Division, Corps and EAC assets had to be developed and processed as well. In all, the WARFIGHTER exercise was a realistic and valuable exercise tool for the 9th ID's EW planning and operation cycle at brigade level.

WARFIGHTER Exercises

Communications during WARFIGHTER

by 1st. Lt. Ursula Key

When planning communications for an exercise like WARFIGHTER, the first step is determining the required flow of communications. It is necessary to determine what assets will be used and to prepare them well in advance. (During BCTP, single channel and multichannel radio and wire were the primary means of communications). The last step was coordinating training/test shots with the distant end to guarantee a good communications path and good equipment. For insurance, it was necessary to have backup equipment and backup communications links.

Single Channel Radio Nets

Secure FM nets were used to tie in communications from the direct support companies to the TCAE over tasking and reporting nets. The IEWSOs for each of the brigades also shared these nets. The battalion TOC used secure FM to establish voice communications to higher headquarters on the Division command, operations and administration/logistics nets. The digital communications terminal (DCT) was used by the TCAE, long-range surveillance units and unattended aerial vehicles (UAV) and interrogation/prisoner of war (IPW) sections to pass secure data to the Division ASPS via single channel (FM) radio.

The DCT was connected to an AN/VCR 46 with a KY-57 to provide a digital, data burst means to pass spot reports. Data burst communications is preferred over voice transmissions because its speed reduces the enemy's chances of locating the transmitter. To ensure success with the DCTs, the radios had to be frequency aligned prior to deployment.

Multichannel Radio

The Division Signal Battalion provided six circuits for the MI Battalion. Two of these circuits were used for switched telephones — one dedicated for use by the S3 section and the other located in a common area. These phones were also used as backup to the FM radio nets. The MCS 2.0 (Hewlett Packard/Grid) system was used over a separate circuit entering the multichannel network enabling it to communicate with other MCS 2.0 systems in the Division. The MCS 2.0 provided the capability to pass electronic mail, unit status updates and situation reports. We also patched a fourth circuit into the SB-22 that provided access into the multichannel network. Two circuits were routed into the communications center. One circuit was used for "engineering" of a voice circuit so the terminating ends could talk to each other. The final circuit was used to pass sensitive compartmented information traffic by teletype from the TCAE to the Division special security officer. Due to security measures, lack of cleared personnel and lack of equipment we used a "stand alone" communications center. The communication center was configured the same way at the Division ASPS. The Division provided the cleared personnel while the MI Battalion provided the equipment and training prior to the exercise. A courier was used as backup.

Wire

An SB-22 was used to tie in two lines to the Corps ASPS because of closeness in location. Two lines were also run to the controller cell which was located with the exercise mapboards. This made communications flow faster from the mapboard to the Battalion TOC and scripting cell. The Division telephone system was used as backup.

WARFIGHTER
Exercises

BCTP: An Analyst's Perspective

by SSgt. Randy L. Junkman

Intelligence plays a major role in the 9th ID's combat effectiveness, and, during exercise CABER ICE, the TCAE of the 109th MI Battalion was at the heart of much of the notional intelligence play that took place. The 109th MI Battalion's TCAE has two primary functions: Management of EW assets and processing, analyzing and disseminating combat information/intelligence reports.

Management of EW assets constitutes positioning them on the battlefield, tasking them with PIR/IR and handling the Resource Status Reports (RSR), TACREPs and requests for information (RFI) initiated by the assets or by the general support company operations center (COC). Management of forward support assets, which are operationally under the control of their respective brigades, encompasses tasking (when it does not interfere with the supported commander's operational goals) and handling RSRs, TACREPs and RFI initiated by the COCs.

Upon receipt of TACREPs from the respective COCs, the TCAE is responsible for several tasks. This includes logging the report, checking precedence and immediate intelligence value, comparing technical date with the TCAE data base and then disseminating the end product.

CABER ICE proved an invaluable tool in preparing the TCAE and 9th ID command elements to efficiently process and effectively utilize intelligence information for combat operations. PIR/IR were developed by the G2, EW target lists and deception plans were developed by the G3 and the respective brigades developed their intelligence requirements. In the hub of the intelligence processing cycle, the TCAE had organized and prepared utilizing operation plans, intelligence annexes and intelligence summaries as base documents.

With these base documents, TCAE personnel were able to construct mapboards and overlays for the operations area, study the OB for enemy units within the 9th ID area of operations and the electronic OB which would be seen with these units, prepare tasking for EW assets in support of division operations and, most importantly, manufacture a computer data base of near-real-world technical information which could be used to drive the TCAE's intelligence output during the exercise. Many lessons were learned during this preparation stage, and the interface with both G2 and G3 was evident from the start.

During the exercise, lessons were learned about asset management and capabilities, lines of communication, division and brigade operations and synchronization of assets. TCAE operations proved smooth and a large amount of viable combat information/intelligence was disseminated for use in division operations.

Future exercises like CABER ICE will continue to develop the 9th ID's combat effectiveness by improving the interface that is a must for successful intelligence processing. Exercises of this type highlight problems that normally cannot be foreseen and train all elements of the command for combat readiness.

WARFIGHTER
Exercises

Intelligence Scripting for BCTP

by CWO2 Dale L. Carrington

To support the 9th ID in the first iteration of the BCTP, the 109th MI Battalion fielded its TCAE and a scripting cell to replicate the intelligence capabilities and products of the Battalion's forward and general support (or C&J) companies without physically deploying those additional assets to the field.

Other CPXs normally take place in a building or limited size tactical site. In CPXs, the normal FM radio communications for the C&J teams to work against are not present. Units are moved or fired by players on a map board as

the battle progresses. Realism is obtained through discussion on enemy/friendly capabilities and doctrine. SIGINT play usually is performed by a chance throw of the dice or the forcefulness of the MI player without the provision of continuity of OPFOR communications means or methods.

In WARFIGHTER, however, the scripting cell replaced "chance" by inserting timely, OPFOR-real communications (COMINT) and noncommunications (ELINT) intelligence into the CPX. A soldier was posted at the exercise controller's ground truth map board to pass OPFOR information as it was being planned to the scripting cell. That information was plotted on the scripting cell's identical ground truth map as the basic reference for the SIGINT scripters. From this reference the appropriate battlefield indicators normally achieved by MI battalion sensors were generated. Control was maintained by constant interface with the ground truth board senior controllers. Jamming and enemy artillery location data were coordinated with the OPFOR controllers and book-value equipment capability effects were used to locate, slow or stop the enemy.

The scripting cell was made up of approximately 16 personnel (per 12 hour shift). These soldiers were normally analysts, intercept operators, OB analysts and supervisors from the forward and general support (C&J) companies. They were tasked to script the sensor reports that duplicated the capabilities of the TOE equipment. Of course, all of the OPFOR's information was not scripted. Great care was taken to ensure that sensors (placed and moved throughout the play by Brigade and Division players) were in the proper place and within the allowable distance to observe the OPFOR activity. If all requirements were not met, the activity was not scripted. Requirements to be met before scripting included location and distance to target, electronic line-of-sight availability and capability of friendly equipment, power of OPFOR equipment, strength of OPFOR, knowledge of specific OPFOR activity taking place, terrain and weather constraints, and taskings to be satisfied.

Referenced enemy OB information and communications data had to be accurate and followed precisely to ensure information continuity as it was passed to the TCAE for analysis and fusion with other information. This required the pre-exercise development of enemy ground OB and their Communications Electronic Operating Instructions for all possible OPFOR units. Although this process was very time consuming it provided an outstanding training opportunity for the analysts involved. For four months, both in garrison and in the field, the 109th worked on developing the communications structures for four OPFOR Corps. Skills developed included knowledge of OPFOR radio capability, structure of forces, equipment and troop strengths, OPFOR normal operating conditions, terrain templating and communications procedures.

Use of a scripting cell during this WARFIGHTER CPX exercised every echelon of the SIGINT system with the Division. PIR/IR were developed from the commander's intent (by G2). Tasking was derived from the PIR/IR (by TCAE). C&J was performed in accordance with the tasking (scripting cell). TACREPS/SALUTE reports were generated based on tasking from TCAE and ground truth from the controller's OPFOR ground truth map board (scripting cell). Collection requirements that could not be met using organic equipment were forwarded back up the intelligence chain as requests for Corps or EAC support. IEWSOs were required to advise their brigade commanders and control their own EW assets. In-depth analysis and timely reporting took place (TCAE to G2). Intelligence updates were exchanged between all echelons. SIGINT was compared with other "INTs" and fused into all-source products (Division ASPS). Commanders learned the value of SIGINT and offensive EW as combat multipliers.

WARFIGHTER was a tremendous training opportunity for the 109th MI Battalion. It stressed our ability to task, analyze and consolidate information for timely reporting of enemy actions and intentions in support of the 9th ID. 1,704 TACREPs were forwarded to Division ASPS from over 6,000 bits of scripted information. Analysts and collectors were trained in OPFOR movement and capabilities. WARFIGHTER also proved the affect an MI battalion can have on enemy equipment and operations.

WARFIGHTER
Exercises

Automation in Intelligence Dissemination

by 1st. Lt. Brian S. Sorley

Within the 9th ID G2 structure, the collection management element is organized under the ASPS. This organization is due not only to the automated nature of the 9th ID and the limited manning configuration that goes with it, but also provides the proximity for a close working relationship between collection management and dissemination (CM&D) and ASPS that is so critically important. For the WARFIGHTER CPX, the combined strength of the ASPS/CM&D was only 10 personnel, with one per shift in CM&D and four per shift in the ASPS.

As a result of the 9th ID's total automation goal, and in conjunction with

the Army Development and Employment Agency, the ASPS/CM&D developed and has used extensively over the past year a computer system known as the Automated Distributed Intelligence System (ADIS). ADIS provided the division with pre-ASAS automated collection management, dissemination and analytical functions. In addition, it served as the main communications line (collateral) between the ASPS/CM&D and the Division collection assets.

The initial division intelligence process began upon receipt of the I Corps intelligence estimate. The ASPS developed doctrinal IPB products for the Division area of interest that keyed the overall collection plan coverage. Upon selection of the commander's PIR/IRs, an asset coverage worksheet was implemented. The 9th ID had available as organic assets a long-range surveillance company, a surrogate UAV, a full range of thermal and EW assets in the MI battalion, and a compliment of cavalry and scout units. Using ADIS, all of these assets were entered and tracked according to availability, mission capability and external factors that would limit overall effectiveness. From this information, taskings for the initial area coverage were developed and forwarded to the appropriate assets. An automated Standard Collection Asset Request Format was used for all SIGINT taskings, while a modified photo area coverage statement was used for UAV taskings.

The nodes of communication for the exercise were varied and extensive. From the ASPS/CM&D node, FM (voice) and FM DCT (linked to ADIS) were the primary communications to the collectors. In addition, links to the 9th ID's automated maneuver control system and a pulse code modulated (microwave) telephone system provided communications to both subordinate and higher units.

All incoming messages that came through the ADIS/DCT node were automatically logged, printed in hard copy and then, depending on the type of message, electronically forwarded to the appropriate analyst or CM&D. Each message was then analyzed as to whether or not it was a new requirement or the answer to an old one. If the message was a response to a previous Request for Intelligence Information (RII) or was new battlefield information, it was analyzed using the available relational data bases in ADIS.

In a division main ASPS/CM&D node, the sharing of relational data bases is always a critical issue. Since one of the design parameters of ADIS was its ability to share data bases, this issue was relatively minor to the 9th ID. All of the functions of a fully manned CM&D could not be accomplished without some external assistance. This was where the benefit of ADIS automation helped. As an example, because of the shared data bases, CM&D was able to hand off RII to an analyst for immediate processing of known information or could access the data bases directly to find the information. The RIIs were stored in ADIS in order of priority and Latest Time Information Of Value and were continually tracked for status and satisfaction requirements. If known information could not satisfy the requirement, then a tasking message was sent out to a selected collector using one or more of the previously listed communications networks. Outgoing messages, primarily taskings, requests and reports, were logged in the system, processed for accuracy and then transmitted via one of the available communications nodes. The overall benefit of the multiple communications nodes was that any intelligence or information that the ASPS/CM&D had on hand reached the appropriate user in a relatively short amount of time. Subordinate S2s received current up-to-date battlefield intelligence and collectors provided almost spontaneous responses to taskings or inquiries.

Over 200 RIIs, 300 tasking messages and an additional 800 collector/inquiry messages passed through the ADIS or an associated communications network. As messages were received, the situation analyst responsible for a specific area of the battle performed an initial evaluation of the information and passed the message to the ASPS fusion team. Assessment of the information by this team generated further queries to collection management. By the efficient use of ADIS' relational data base, the ASPS/CM&D team processed more combat information and intelligence than would have been possible using conventional mechanical methods.

The result of this exercise was that frontline commanders and battle staffs received near-real-time intelligence with which to make crucial war fighting decisions. In the 9th ID, automation has proven to be a highly effective tool for getting inside the enemy commander's decision cycle and ensuring decisive victory. The WARFIGHTER exercise demonstrated to the entire Division battle staff what a pivotal role CM&D plays in mission accomplishment.

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INTELLIGENCE PROCESSING — the ASAS Connection.

by Douglas H. Lincoln

It is a military axiom that a commander is as good as his intelligence. Accurate and timely intelligence is one of the key factors supporting any successful military campaign. Great battles have been won or lost based on the quality of available intelligence. Accurate and timely intelligence has consistently given the battlefield commander a decisive edge and ultimate victory.

Historical Analysis

In the past, intelligence processing was relatively simple. Intelligence gathering was one-dimensional consisting only of human intelligence (HUMINT) sources. Collection of intelligence was accomplished by scouts, reconnaissance patrols, observers, spies and interrogators. There was no written guide to explain the procedures required to produce usable intelligence. Human analysts, through their experience, followed a logical and sensible approach to providing needed answers to vital questions. The analyst would process, correlate, evaluate and disseminate finished products to decision makers in what was then a timely manner. This archaic manual method of processing information was adequate for the time. Timeliness of information wasn't as critical then. Keeping track of vehicles and troop movement was relatively simple. Reaction time was poor, due to slow communications. Timeliness of intelligence became a factor on the battlefield as ways were discovered to exploit the audio, visual and electromagnetic spectra. New methods and systems evolved allowing the commander to hear and see deeper into the battlefield, respond faster and obtain a decisive edge.

World War I accelerated the fielding of communications systems to collect against air, naval and ground communications for intelligence purposes. Direction-finding (DF) stations were introduced into the German army in 1915. Soon after the beginning of the war, the British had developed a DF system. The French and Italians were also active in this field. Electromechanical systems collected and sent additional data.

MOBILE RADIO DIRECTION FINDER

Signals intelligence first became an important source of intelligence in World War I.

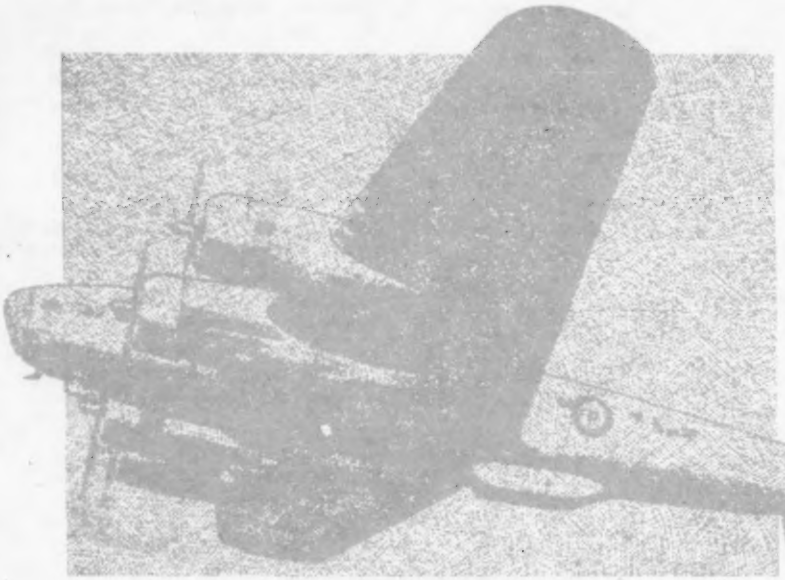
At the front lines in France, U.S. Army units intercepted traffic and pinpointed the locations of enemy positions by goniometric radio direction-finding. Collection techniques were developed to exploit and intercept signals from telephone and telegraph wires. Acoustic and optical sensors contributed to intelligence by performing early warning functions. Aerial photography added yet another source of intelligence. Although these systems are seen as primitive and awkward by today's standards, they did provide additional information to the fledgling intelligence effort of the time. While new means of collection were added, a disparity grew between the collection capability and the inability of analysts to process the greater volume. Intelligence processing transitioned as time passed from the analysis of one source of information, to many. Each new collection source brought quantum improvements to the collection phase of intelligence gathering.

During World War II, a growing suite of sensor systems was being developed or refined by both the Germans and the Allies. Alfred Price, in his book, **The History of U.S. Electronic Warfare**, traces the research, development and use of electronic intelligence (ELINT) receivers, jammers and countermeasure devices in the European, Mediterranean and Pacific theaters.

German expertise in radar research was well developed by World War II. They had been experimenting with electromagnetic waves since the early 1900s. They had a variety of radars deployed throughout Germany and occupied Europe. Meanwhile, the U.S. Army Air Force converted some B-24 and B-17 bombers into ELINT collectors (Ferrets) and jammers. In the late spring of 1940, the Germans developed a long-range, blind bombing system codenamed "Knickebein" (broken leg) for night combat similar to the aircraft radio range navigation system. By flying between Morse dots and dashes established by ground stations, the pilot simply had to fly the center of the beam where the signals merged to produce a steady signal to the designated target. In June 1940, a British RAF ELINT aircraft found the full pattern of "Knickebein" signals by accident. Once known, the method of operations was obvious. The "Battle of

the Beams" began. Both sides jammed, deceived and tried to confuse the other's communications and electronics system.

The Allied victories during World War I and II were popularly attributed solely to the clash of armed forces on the battlefield. Only recently has the decisive role of intelligence, especially signals intelligence (SIGINT), surfaced. Historians now contend that without this advantage, the Allies would have suffered higher casualties in battles won, and marginally successful battles could have been lost. The contributions made by the intelligence analyst in successful campaigns is not clear. However, it is safe to assume that the lack of timely and accurate intelligence could be cited in defeats.



While the capability and sophistication of collection systems continued to grow, the analytical tools for tactical processing of information remained virtually unchanged, except to add requirements for more analysts and more developed analytical capabilities. Even in recent times and prior to automation, more data equated to more analysts. The goals of an analyst were the same then as they are today. The analyst viewed the integrated picture in the context of the enemy, weather and terrain. This detailed narrative picture provided the commander the assessment of the battlefield. Often, the analyst's workbook, experience and intuition were all that was available to the G2 when briefing the intelligence estimate of the enemy's intentions. Vital information which could have contributed to a more accurate picture of the enemy often went unprocessed and unevaluated. The manual approach or "shoe box" method of storing, retrieving and cross-referencing was only as effective as the analyst's memory and skills. Perishable data was sometimes of such short duration that significance of information could not be assessed in time to be of value.

The Birth of ASAS

How often have analysts complained about too much information and too little time to analyze it? This serious question has not been actively addressed — until now. The All Source Analysis System (ASAS) is currently under development to provide today's commander with the dynamic intelligence necessary to win the foreseeable lethal war. It provides the automated help analysts need to rapidly provide the battlefield commander with accurate, near real-time intelligence products.

An important first step in committing resources occurred with the formation of the Joint Tactical Fusion Program Management Office in February 1981. By 1984, the ASAS Required Operational Capability Document was formalized, a Functional Capabilities Document published a joint statement of requirement with the Air Force, and Functional Area Experts Forums (FAEFs) were being conducted. Results of these forums provided a joint agreement on functional requirements for automated intelligence processing.

The FAEFs identified all desired functions of the ASAS and drew up automation recommendations. The high degree of functional similarity identified between the systems' hardware and software components expedited system development and later interoperability between the systems.

A "feedback" mechanism was implemented to examine currently fielded automated systems performing intelligence functions to assess technology that could be incorporated into the ASAS. Two such systems are the MICROFIX and the Technical Control and Analysis Center (TCAC).

MICROFIX is a quick reaction capability system. Its purpose is to introduce automation to the field and aid intelligence personnel in becoming computer knowledgeable before the deployment of future automated processing intelligence and electronic warfare (IEW) systems. The MICROFIX currently supports functions of the technical control and analysis element, MI tactical operations center (TOC) and the terrain teams of the engineer topographic battalion.

The TCAC, also a quick reaction capability system, is the first tactical system providing limited automated support for the processing of data derived from SIGINT. This system aids processing, correlation, evaluation and dissemination of SIGINT products to designated tactical users.

The MICROFIX and TCAC systems improve the analyst's ability to access data through dynamic files and data bases. Though all input/output of the MICROFIX is done manually and graphics are not a part of the TCAC, their combined capabilities provide valuable feedback to be applied to the development of the ASAS.

Following its goal of a phased development strategy, the Army approved the construction and fielding of limited capability configuration ASAS systems. This initiative will give soldiers the chance to provide feedback to the development of the full scale objective systems.

ASAS System Overview

ASAS is the Army product of a joint Army/Air Force effort to develop and field a modern and interoperable IEW system. System flexibility will accommodate evolution in doctrine and organization for combat as mission requirements dictate. ASAS supports single source analysis and the fusion of all sources of intelligence, as well as the management and control of collection and EW resources in a sensitive compartmented information environment. For example, the system combines information and reports from many sources and synthesizes the data into coherent, accurate products to delineate and project activities on the battlefield. Using modern data handling technology, color graphics display and data volume compilation, ASAS gives the analyst a more complete perspective of the battlefield and provides near real-time data to the decision makers. The functional components of ASAS are grouped operationally into two interconnected enclaves: the tactical operations center support element and MI battalion or brigade TOC. Each enclave consists of two or more modules or units.

ASAS Interfaces and Operations

Take for example a division TOC and its associated MI battalion TOC. Each enclave could be separated by 10 to 15 kilometers in a tactical environment, but all functional workstations would be electronically connected through the use of secure voice and data link communications. Capabilities of the TOC support element enclave are:

- The collection manager generates intelligence collection requirements and missions for assets of the MI units, as well as other tactical collection assets.
- IMINT analysts process imagery reports derived from radar (fixed and moving targets), infrared and photographic sensors. The processed data is entered into the All-Source Correlated Data Base (ASCDB).
- HUMINT analysts process reports derived from counterintelligence, interrogation teams, troops, document exploitation and combat elements. This processed data is also entered into the ASCDB. All-source processing analysts maintain the ASCDB by rapidly integrating information from the various intelligence disciplines of HUMINT, IMINT and SIGINT.

DIRECTION FINDER

An Army sergeant of the 3rd Armored Division operates a radio direction finder near Stolberg, Germany in October 1944.

- Situation development analysts integrate enemy order of battle, weather and terrain data with the ASCDB. They also maintain the electronic situation map and report all-source intelligence to tactical users in the form of intelligence products.
- Target development analysts compare target selection criteria against the ASCDB and intelligence preparation of the battlefield process. The target analyst prepares information for preplanning targets and reports target nominations to the fire support element or other elements of the fire support coordination staff.
- EW support analysts plan and evaluate the execution of electronic countermeasures missions in support of friendly operations.
- Operations security support analysts provide vulnerability assessments in support of friendly operations and develop the basis for battlefield deception operations.
- The MI TOC enclave conducts missions to support the technical control of assets and single source analysis. The asset manager tasks organic collectors and jammers and provides technical support for task execution. COMINT and ELINT analysts process communication and non-communication emitter reports to determine enemy identifications and locations. The COMINT-ELINT integration analysts process and integrate the COMINT and ELINT data into SIGINT. Significant information developed by any of these analysts is reported in near real-time to update the ASCDB or directly to the target analysts.

ASAS Module Description

A combination of functionally unique modules plus a support vehicle will comprise each ASAS. The following descriptions explain each separate module of the overall system.

PORTABLE ALL-SOURCE WORKSTATION (PAWS). The PAWS can be housed in various shelter models and transported in a commercial utility cargo van (CUCV). It is a smart, ground-based workstation that provides the primary man-machine interface to the ASAS system for intelligence analysis and system control functions. When connected by a local area network to an ASAS interface module, the PAWS allows operators to perform any of the system's IEW functions. It also has significant stand-alone capability.

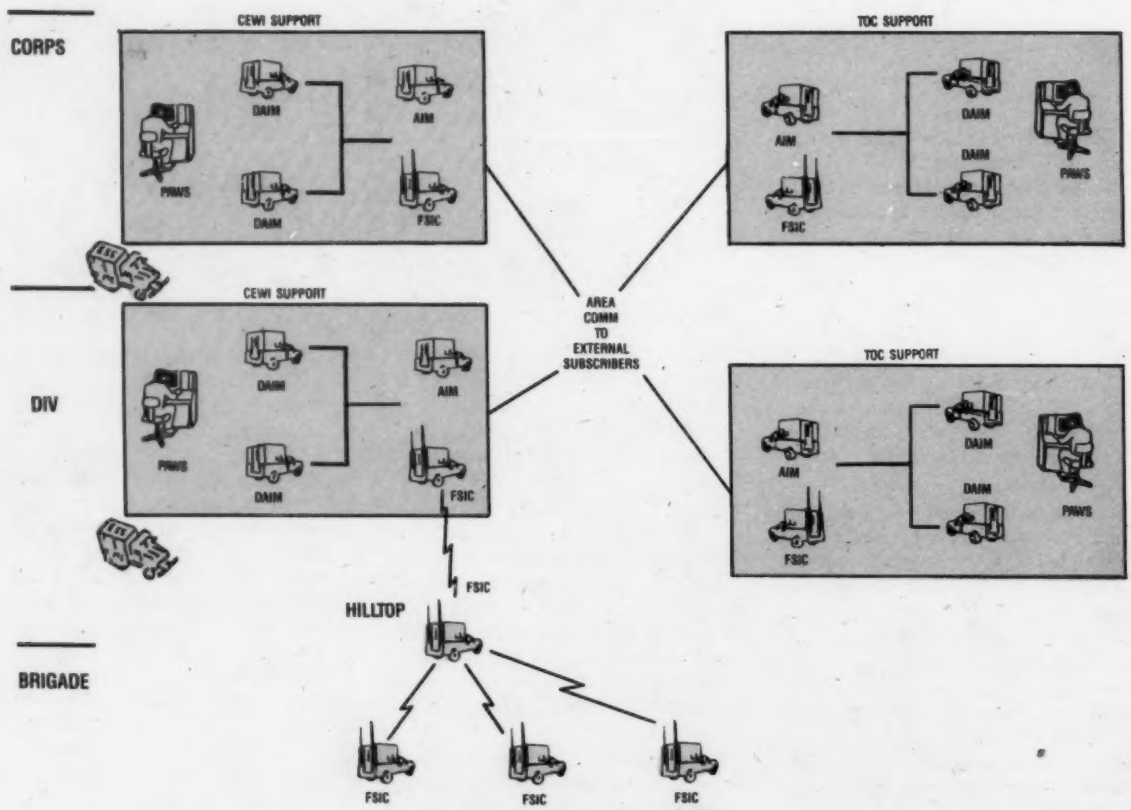
ASAS INTERFACE MODULE (AIM). The AIM is housed in an S250 shelter and mounted on a CUCV. The AIM is capable of supporting up to three dismounted PAWS. The workstations can be set up and operated within an enclave when tied together by a local area network. From the enclave, an AIM with three workstations is used to support the main TOC functions of the G2, G3 and FSE/FSCOORD. The AIM can also be used to support ASAS remote location requirements.

DUAL ASAS INTERFACE MODULE (DAIM). The DAIM is housed in an S250 shelter and mounted on a high mobility, multi-purpose wheeled vehicle (HMMWV) or CUCV. The primary difference between this module and the AIM is the capability to support up to six workstations. Both modules have the capability to reallocate workload, which provides flexibility to react to mission processing and product changes.

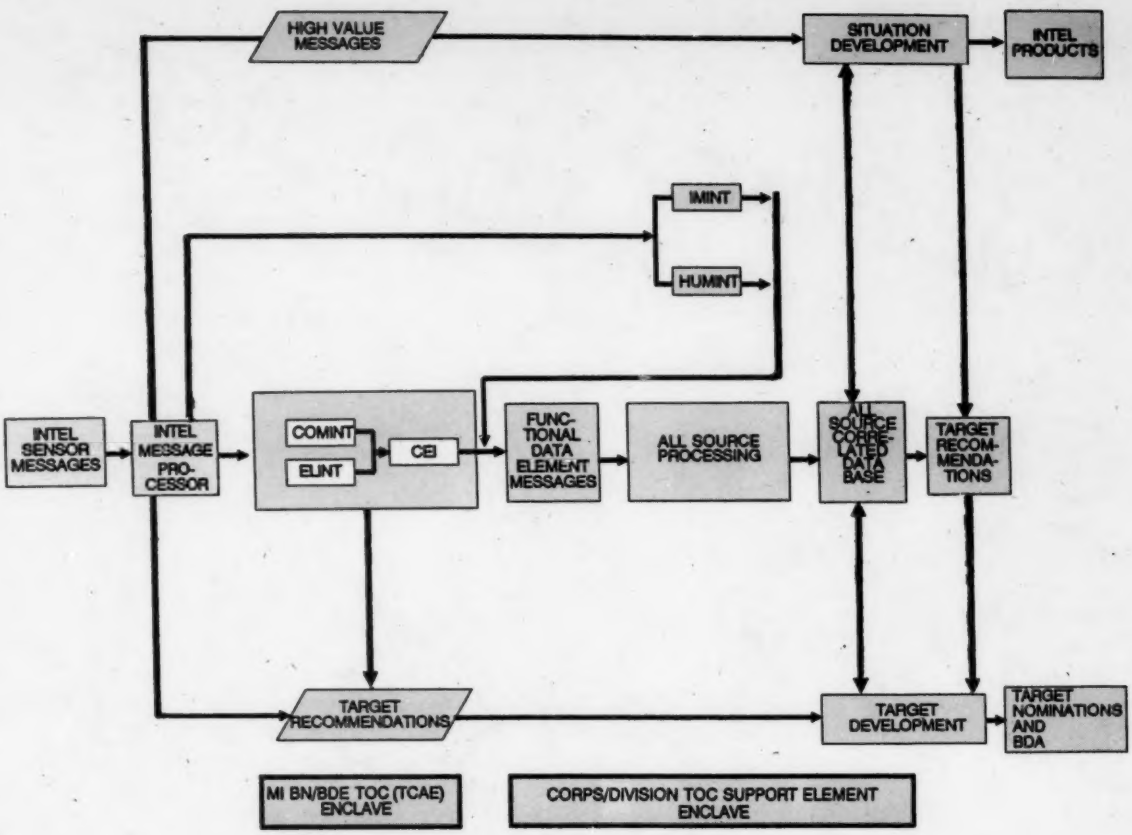
FORWARD SENSOR INTERFACE CONTROL (FSIC). The FSIC serves as an intelligence message concentrator and relay between forward sensors at the FLOT, brigade assets, and the CEWI and TOC support element enclaves.

ELECTRONIC SUPPORT SHELTER (ESS). The primary ASAS maintenance support facility at division and corps is the ESS module. It contains the necessary test measurement diagnostic equipment, supplies and maintenance-related material to support the ASAS. It will be used for both unit and intermediate level maintenance.

A hypothetical situation can illustrate how ASAS is designed to work. A tank unit is identified and reported in an IMINT message. A tactical report message from a COMINT collector reports a tank unit located in the same approximate area. These messages are routed to the appropriate single source analysis functional area and undergo processing. The messages are broken into functional data elements reflecting highlights of the information reported (unit, size, location, etc.). The all-source processing analyst performs time and location correlations to determine if these reports represent the same enemy activity or node on the battlefield. If so, a discrete identification and location is



ASAS Module Deployment and Functions



System Enclave Functional Information Flow

established and entered into the ASCDB and, if appropriate, an immediate report is forwarded to designated users. The process is continued for all other incoming data to strengthen the reliability, accuracy and status of this enemy node. Similar processing procedures are accorded to other incoming data for the development and update of enemy nodes and inclusion in the ASCDB. This rapid-fire procedure allows the tactical decision maker ample time to react to developing situations.

Conclusions

ASAS will deploy to any area in which Army, joint or combined forces operate. The system will be assigned to MI brigades and battalions and to divisional headquarters. The actual number assigned will depend on operational requirements.

ASAS is an intelligence processing system designed to support the tactical commander with the dynamic intelligence necessary to win on the modern battlefield. When fielded, ASAS capabilities in IEW collection management, analysis and reporting will provide the battlefield commander additional time to see deeper into the battlefield, respond faster and obtain the decisive edge.

The battlefield commander will be better able to use IEW sensor and jammer capabilities to see and judge enemy reaction to friendly actions and operations. He'll be able to determine where priority of efforts best serves mission objectives and react faster than the enemy's decision cycle can respond. The battlefield commander will have more confidence in decisions on force allocation and greater opportunity to seize the initiative. ASAS will provide the field commander with detailed IPB and timely, accurate intelligence, enabling him to concentrate firepower and maneuver at the right place and time to face a numerically superior threat force — and win. ★

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COMRADES *and* COMPUTERS

by Capt. Ralph Peters

Soviet conventional military forces are struggling to computerize. A review of the frank, open-source literature recently published by Soviet officers on subjects related to computers and automation provides us with the opportunity to assess the current state of this high-priority effort. Some of what we read simply verifies what we have known or suspected — Soviet computer technology lags significantly behind that of the West. Indigenously-produced hardware is in short supply and often proves unreliable. The civilian sector computer culture that has enabled Western militaries to move ahead with computerization does not exist in the Soviet Union and software problems abound.

It also becomes evident, however, that the Soviets are making substantial progress in military computerization — especially in those areas where they have chosen to weight the effort. This development parallels the generalized performance of the Soviet system, wherein a concentrated drive that receives priority on resources and quality personnel achieves results while the rest of the Soviet system lags behind. In computerization, as in virtually every sphere of formal endeavor, the Soviet system contains startling contrasts. This is a system in which, as the Soviet analyst C. N. Donnelly has observed, the computer seeks to replace not the adding machine but the abacus.

In theory, the Marxist-Leninist-based Soviet system is an ideal candidate for computerization. Westerners tend to emphasize the difficulties a nationwide network of home computers would create for state and internal security forces. But the security apparatus is only one manifestation of the system. When we root around for underlying methodologies that permeate the society-state of the Soviet Union, we discover that the Russian variant of the Socialist experiment is conceptually a quantitative phenomenon. The Soviets have made a religion of numbers. No Wall Street brokerage firm is more obsessed with numbers than are the Soviets involved in centralized planning, whether economic or military.

Centralized planning, either for economic purposes or in military operations, relies for its efficacy upon the timely and accurate processing of vast amounts of multidisciplinary data. Thus, the computer appears to be the long-awaited solution for which the Soviet system has been searching. But even this may be deceptive. The fundamental problem in Soviet-style centralized planning may not be the timely and operationally-relevant correlation of data but, instead, the inability of the system to provide accurate data for its own consumption. The hackneyed phrase "garbage-in, garbage-out" acquires a new immediacy in the realm of automation support to Soviet centralized planning. The Soviet manager, whether of a

factory or a training unit, has long been accustomed to lying for advantage. Industrial managers lie about production capacities as well as actual production, and a number of articles by Soviet military authors have criticized the falsification of training statistics and other quantitative measures of success. Even in the Great Patriotic War, subordinate commanders did not always report truthfully to their superiors. Even if the Soviets manage to develop a technologically world-class information culture armed with large numbers of computers, they will still need to solve the endemic problem of inaccurate reporting.

Anyone who studies texts on Soviet economics will be struck by the similarities in methodology between Soviet production forecasting and the military correlation of forces evaluation process.[1] Yet, while we freely acknowledge the failure of the Soviet economic model, we credit the Soviet military system with tremendous capabilities presumably derived from "disciplined efficiency" of the same underlying methodology.

Although Soviet moves to employ computers in an operational role on the battlefield may well have a significant impact on a future war, it is advantageous to consider Soviet attempts to computerize training efforts. The Soviet discussion of this aspect of the automation problem is the most open, and some measurable results are already apparent in the training sphere.

The Military Academy of the Soviet Armed Forces General Staff *imeni* K Ye. Voroshilov is the closest Soviet equivalent to what the U.S. military would have if all of our War Colleges were combined and given the missions not only to prepare senior officers for joint and combined operations but also to design and evaluate battlefield theory. There is no more prestigious school in the Soviet military system. Only the Frunze Academy, an approximation of a joint Command and General Staff College, comes close in its importance to the systems of both officer education and the formulation and testing of military theory. Due to its prestige and importance, the Voroshilov Academy receives top officers for its staff and has first claim on educational resources. Thus, we may reasonably expect it to be at the cutting edge of automation of the officer education process.

The current chief (director) of the Voroshilov Academy is Army Gen. G. Salmanov, formerly senior Soviet military "adviser" in Afghanistan. Shortly after taking charge of the academy, Salmanov gave a pertinent interview to an ***Izvestiya*** correspondent[2] and also published a related article under his own name.[3] During the interview, Salmanov stressed the importance of computers, of fresh approaches to military problem-solving and of innovative educational techniques. Then the newspaperman was steered to the Troop Control Faculty where three first-year students huddled at an automated work station. The students were all colonels. The training called for the students to play roles of commander, chief of staff and a member of the organization's military council. The mission was to route an "aggressor" force.

The commander ordered the computer operator — who was NOT one of the students — to call up data first on the enemy, then on friendly forces. The screen displayed a bar chart illustrating the available nuclear rounds, data on available field artillery systems and helicopters and so on. When considering the friendly tallies, the commander became dissatisfied. He ordered the operator to correlate (mathematically juxtapose) the data on the opposing forces.

It became apparent that the Soviet force was seriously deficient in key items of equipment. An additional display screen offered complex weapons value graphs, allowing the students to shift assets around the hypothetical battlefield and restructure their counterattack so that the numbers worked to Soviet advantage at the point of decision. Once they were satisfied with the attack force package, the students war-gamed the first four days of battle, modeling the introduction of reserves on the second day and a variety of possible enemy responses to friendly actions. Finally, the students achieved what the computer allowed to be a workable scheme, and the commander approved the battle plan. At that point, the instructor took over for a critique of the exercise. In closing, the article stressed that this was an introductory lesson, and that further training would introduce "nonstandard decisions and the revealed secrets of the military leaders' 'trade.'" The article implied that the Soviet training establishment is very proud of this training technique and places great faith in it, while even more sophisticated programs of a classified nature are available for advanced training. The obvious qualifier is that the Voroshilov Academy is the flagship of the officer education system and receives top priority on virtually all resources. Many of the dozens of Soviet academies for officer education are considerably behind in their own automation efforts.

"In not a single instance . . . has accountability been demanded for lack of . . . mastering computer technology."

In his own article, Salmanov offered a catalog of those subjects he feels are appropriate for computer-assisted training: "We are undertaking all measures to make wider use of the technical means which have been mentioned on lessons for the intensification of instruction, operations research, systems analysis, simulation and forecasting." Yet he is open in acknowledging that computerization of the training process remains a problem, singling out as trouble spots the areas of "the deeper mastery of information theory and the principles of computer technology by teachers and students." Even the Voroshilov Academy is only "equipped with contemporary computer equipment to a sufficient degree."

Below the levels of the Voroshilov and Frunze Academies, but still within the small circle of top schools, the Higher Infantry School (*Vystrel*) managed to impress a visiting East German officer with its multimedia approach to training.[4] The *Vystrel* is traditionally a "hands-on" school for combined arms warfare, where 65 percent of the training time is spent in the field. The remainder of the training time is occupied with interactive television films, including battle problem cartoons and topographical problems. In general, the students learn theory in the classroom, with each officer "commanding" his own work station. The knowledge is then exercised in the field. The *Vystrel* also has automated trainers to familiarize students with various weapons systems. While weaponry is not produced

"In theory . . . the Soviet system is an ideal candidate for computerization."

at the *Vystrel*, it has become routine to conduct operational tests there. At present, the *Vystrel* also seems to be a test bed for multimedia automated training techniques.

Overall, however, the Soviet military is clearly dissatisfied with the ability of the officer corps to assimilate computer technology. A recent article by an engineer colonel stressed the importance of offering more and better "courses in higher mathematics, technical cybernetics, theory of mechanisms and machines."[5] The article implied that officer training in general is unsatisfactory, given the increasingly complex demands of the contemporary battlefield. The colonel is convinced he has the prescription. He closes his article by stressing that "much will depend on. . .how rapidly a comprehensive type training material base will be developed, based on the extensive use of computer equipment."

In between tales of successes and failures, contemporary articles on computerization occasionally offer direct, penetrating insights. A recent piece on computerizing ideological work and training bemoaned the current situation: "We are moving to total computerization of teaching, while we have not yet planned for such a minimum requirement as typing in training programs. . . ."[6]

The same article complains of software deficiencies and the shortage of competent programmers. While discussing "using automated teaching systems created on the basis of third-generation minicomputers," the author notes that "computerized teaching methods scare social scientists, and traditional thinking prevails." He complains about "formalism in training," which is an allowed Soviet term to describe poor training in general and, especially, lockstep training where there are no challenging surprises. Unintentionally, the author tells us something additional about the state of Soviet computer assimilation when a senior instructor must call on an engineer to change a disk before a simple training program can proceed. Such individual helplessness is especially noteworthy since the event occurred at a "high-quality" signals school and was accepted as being in the natural order of things.

A Soviet officer rarely has a home computer. Computers are expensive, difficult to acquire and usually only available to the very influential. A great advantage for the U.S. Army has been the prevalence of automated "toys," from sophisticated home computers that spur officer and enlisted users to greater on-duty achievements, to video games that informally condition Armor Branch troops for the efficient use of state-of-the-art tank fire control systems. The average U.S. soldier brings a level of "information culture" to his service that is truly remarkable in comparison to the deprived conditions of his Soviet counterpart.

Yet, despite the nonavailability of computers to most Soviet officers outside of the workplace, the number of "computer heads" within the officer corps appears to be growing rapidly, and computer clubs are springing up in the more technologically-privileged areas. There are at least three interrelated reasons for this spread of the cult of automation. First, the military system is pushing computerization from the top and pushing it hard. Secondly, computers are becoming much more available within the services. Thirdly, those officers with an interest in computers usually seem to be welcomed by commanders and staff officers. The "computer heads" are finding their way to computers, and there even appears to be a ground-swell of practical applications from the lower echelons of the system.

An excellent example of local initiatives in automating training comes from a recent article in ***Krasnaya Zvedzda*** on accelerating the training of air defense troops.[7]

Overall, air defense forces are more apt to welcome and assimilate automation, due to the time-space dynamics of their mission. Far from being a luxury, automation is essential to the functioning of modern air defense networks. Thus, it is interesting to hear repeated complaints about the reluctance of officers to introduce computerized training methods. They complained that the computerized techniques not only forced them to prepare and conduct training more professionally, but that the new systems were programmed to identify the individual or collective making errors at each phase of the training. Compared to the traditional Soviet approach to low-level training, the new methods put unaccustomed pressures on officers and units to perform and often highlighted embarrassing deficien-

cies. These same qualities appealed to those responsible for improving the quality and accountability of subordinate unit training.

The featured air defense unit in the article achieved good results with a program designed to test the crew of an air defense command post. The article even noted that "interference conditions loaded into a computer program make it possible to compare the actions of specialists under conditions of different psychological and physical stress levels and to uncover mistakes." A related unit training diagnostic program, when analyzing training results, came up with a surprising conclusion that "showed the dependency of specialists' technical and special training on physical training," and led to the identification of ski and cross-country training as most appropriate to the physical conditioning of air defense troops assigned to the unit.

The air defense article moved from reporting positive results to identifying problems that remained insoluble within the unit. The unit's computerization of training had been a local initiative, designed and executed on a non-TO&E machine. A new air defense system had not brought adequate training devices with it. Improvising, local computer talents went to work and obtained substantial results. The unit chain of command became so enamored of computerized training methods, however, that they identified a need for "a program of air defense combat models and optimum action models for each crew member of a surface-to-air missile complex (ZRK)". Unfortunately, this task proved too complex for the local programmers. Even recent graduates of military schools with specialized degrees could not convert the requirements to algorithms and the unit had to turn to "the assistance of consultants."

The author of the article complained of the lack of general expertise and will to automate, even recognizing that, given the obstacles placed in the way, "it is not surprising that junior officers often appear as adherents of 'old' methods of operation." The author also charged the military educational systems with neglecting the need for good, standardized unit training programs: "Why did the ideas of computerizing instruction spring up at a regiment and not at scientific institutions and military *VUZs* (schools and academies) that have ASU (automated control system) departments and computer facilities?"

A horror story emerged from a short article on helicopter training.[8] The unit conducted dull, virtually worthless blackboard training although simulation equipment that could save resources and enliven training had been delivered two years previously. The unassembled trainers had been exposed to the elements, apparently from sheer inertia, while the unit waited for "instructions." Even visiting commissions had glossed over the problem, merely discussing whether or not a new training facility should be built, although adequate room for the simulators existed in the unit's classrooms. The only recent progress that had been made was to cover the training equipment with canvas. The article concluded with the pessimistic claim that "the expensive equipment continues to be a dead weight because of the lack of initiative on the part of those in charge. And the commanders are forced to explain to the pilots 'with sign language' how to fly the helicopter in this or that situation."

The non-Soviet East Europeans are moving out as rapidly as their austere budgets permit. A Soviet reprint of a Polish military press article described an automated gunnery simulator that used a microprocessor to select varied target arrays that corresponded to different skill levels. The commentary highlighted well-known deficiencies in most Warsaw Pact tactical training. However, the author valued the system because it would not allow the falsification of scores and because it would prevent the units undergoing training from figuring out all of the target arrays in advance.[9] The Poles expect the device to allow them to double the pace of gunnery training.

On the subject of computer support to combat operations and command and control, two recent articles are worth quoting at length. The first piece attempts to correct misconceptions that apparently have gained wide currency within the Soviet military.[10] The author begins:

"When military specialists describe features of modern combat, they note above all its spatial scope, high mobility and decisiveness of troop actions, rapid changes in the situation, massed employment of powerful weapons and finally its transient nature. All this led to a sharp increase in the amount of data

"Certain officers . . . exaggerate the capabilities of computer utilization."

needed by the commander and his staff for making the only correct decision without delay. Under conditions of an acute time shortage, any delay in processing data becomes extremely undesirable, since it oftentimes is fraught with very serious consequences. . . . Science comes to our help: information theory, mathematical statistics, queueing theory, mathematical modeling, games theory, and so on; and modern electronic computers for military purposes."

The author then elaborates by differentiating between on-board automatic systems and automated support systems. He stresses repeatedly that "there is no need to prove that man is fundamentally irremovable from the sphere of control of combat actions . . . (the computer) acts as the commander's intelligent, impartial adviser. That is how informative data is turned into control data, as a result of which the sum of objective data needed for decision making is promptly formed." Based upon a survey of other articles, this overemphasis on the necessity of maintaining control over the computer makes it plain that the computer's limitations are not always clearly understood. Soviet officers, once exposed to functioning computer models, often seem to become so enchanted by them that they expect the computer to make their decisions for them.

A closely related article deals with a range of computer-related issues from operations to training and from leadership to systems integration.[11]

"Computer technology is invading our lives on an ever more widespread scale. It has become the key element in many weapons systems and guidance systems. This has had a direct influence on the managerial activity of commanders and their staffs and presented them with new requirements. Officers' knowledge of computer technology and their ability to use the great and diverse opportunities it presents today comprise one of the most important considerations in enhancing the combat readiness of military collectives. . . ."

The officers responsible for this article go on to speak of contemporary "paperwork prisons" and to point out that, with the proper employment of computers, "we have the capability to shift a great portion of the managerial tasks and all routine operations to automated means of information processing, to free command personnel from a significant share of this laborious effort and allow them the opportunity to turn their main attention to resolving matters of tactical operations."

As an immediate example of where "routine" matters can be handled by automation, the authors cite flight operations scheduling. "Exhausting manual calculations" can be eliminated. However, the authors turn next to lamentations about the necessity of enforcing a "restructuring of the psychology and thought processes of commanders and directors of all ranks. Actuality indicates, unfortunately, that not everyone is ready for this."

The authors cite examples of local success, only to complain that they are far too personality dependent. When the computer literate or driving force officers leave, the unit goes backward.

"Soviet centralizing . . . may not be the answer . . ."

The authors also distinguish fence-straddlers among commanders who "believe computerization should not be forced, that it just amounts to paying homage to fashion." The attitude of the authors, on the contrary, is that computerization must be force-fed to the military as a whole, whether they like its taste or not. They not only demand that the "leader's personal example" set the tone but that computer literacy be rated on officer efficiency reports.

Again and again, articles call on Communist Party cadres and collectives in the military to lead the way. This article goes so far as to take the Party organization itself to task: "Up until now activists have been displaying unwarranted tact, especially in dealing with communist leaders. The fact of the matter is that in not a single instance where it has been deserved has strict accountability been demanded for a lack of conscientiousness in mastering computer technology." Until recently such accusations would have been unprintable.

As in the Voroshilov Academy example, the authors comment that most officers do not deal directly with the computer but through a technician at the computer center. Most operations are conducted by a computer programmer and it is necessary for the officer to correctly present the problem to him, then be able to evaluate how it has been solved and arrive at proper conclusions, etc.

The authors then move to an unexpected and worrisome plane for those of us who have long counted upon Soviet overreliance on quantitative methodology: "Another area requiring the attention of leaders and party organizations is the attitude of certain officers who exaggerate the capabilities of computer utilization, who contend without justification that the presence of the computer in itself will ensure high-quality fulfillment of the tasks with which they are faced." An example is cited of an officer who "entrusted too much responsibility to the computer" and allowed it to make a tactical decision for him — which turned out to be wrong. The obvious point is that at least some Soviets have matured to the level where they not only realize much of the computer's theoretical potential but are also growing wiser as to its liabilities.

The authors conclude this powerful article with an attack on non-believers: "lack of computer literacy cannot be tolerated," and it is necessary "to introduce in the officer training program a special discipline for computer studies . . . . In addition, it would be useful for staff and service sections to make provision for nonorganizational (and organizational, in the future) duty positions for computer programmers and technicians which would encompass basic functions associated with data programming systems subelements."

The computer, the authors ultimately contend, "determines the pulse of time and every military leader must clearly recognize this fact."

Other contemporary articles cite successes in automation of a tank repair enterprise[12] and the value in automating files in military record-keeping (where card files are still the norm).[13] There are complaints that "information culture is lacking" and that "the little counters on bookkeepers' abacuses are still clicking in the offices of military commissariats," while in other organizations wastage occurs because "expensive computers only fulfill the role

of providing interior decor."[14] There are even worries about potential problems in Western computer technology, including attacks on the Strategic Defense Initiative from the angle of the great dangers inherent in any system so reliant upon computerization to drive decision making.[15] The same series of articles calculates that "the elaboration of the software alone for SDI will take more than 30,000 man-years," which may better reflect Soviet fears, propaganda efforts and technical inadequacies than actual Western capabilities.

Beyond the human factor, software seems to be the number one problem for the Soviets. While hardware can be stolen or imitated, direct software transfers are not always feasible. A frustrated author addressing the slow pace of computerization of the training process at military educational institutions flatly states that "computer software is the Achilles heel of the computerization training process . . . there are not enough programs. And this is a complicated job."[16] Further, lack of a central information center leads to local responsible officers (re)"inventing the wheel." This particular article suggests that a central software clearing house should be established at the Main Directorate for Military Educational Institutions of the U.S.S.R. Ministry of Defense.

A conscientious review suggests that the Soviet solution of centralizing problems may not be the answer this time. Nor is decentralization the problem. The authors cited above are probably correct in complaining that the basic problem is a lack of "information culture." The Soviet system is not well-designed to encourage either innovation or the exploitation of the innovations of others — although it does foster extensive improvisation. To speak in quantitative terminology, the Soviets simply will not be able to log the necessary nationwide man-hours on computers to lead to the sort of casual acceptance of automation bred by the contemporary experience in the United States and Northwestern Europe. While reforming authors sincerely lament the fear of computers, they fail to see the inconsistency in telling officers that they cannot touch, personally use or acquire the few, often fragile computers in the Soviet inventory. Certainly, the Soviet strategic-level computerization effort has gained some high marks in limited spheres — and the East Europeans are producing better and better computer components — but, overall, the Soviet computerization race is limping along, at best. This is despite the enthusiasms and determination of a convinced minority.

Many of the Soviet tribulations with the introduction of computers will sound familiar to Western readers, from "fear of flying" to the inevitable frustration of trying to get the software right. But these similarities should not obscure the difference in focus: whereas we view the computer as a helpmate in extending human possibilities, the Soviets view it as a potentially powerful tool for more effectively controlling those possibilities. If any image lingers from an extensive reading of Soviet literature on computerization, it is precisely that vision of the computer as an instrument of control.

"Soviet computerization . . . is limping along, at best."

Nonetheless, we must admire the bravery of the Soviet attempt to catch up with the West — a struggle maintained against increasingly heavy odds — even if we soberly doubt that their effort will succeed. ★

Footnotes

1. For a classic example, see Morris Bornstein, "The Soviet Centrally Planned Economy," reprinted in his **Comparative Economic Systems** (Homewood, Illinois: Richard D. Irwin, Inc. 1985). By substituting a few terms, the following quotation could appear in an approved Soviet military text: "In the planning process, the critical link between input authorizations and output assignments for an enterprise is a set of input norms. These technological coefficients state how many units of labor, machine time, and materials and components of various kinds should be necessary to produce one unit of output. These norms are initially based on statistical studies of past experience, but they are often revised ("tightened") to reflect expected gains in productivity, in the technical sense of reductions in the amount of labor time, machine time or materials required per unit of output."

2. N. Sautin, "Leaders Are Not Born . . . Reportage from the General Staff Military Academy," ***Izvestiya***, November 1, 1986 (Morning Edition).

3. Army Gen. G. Salmanov, "Teach Creativity," ***Krasnaya Zvezda***, November 5, 1986, p. 2.

4. Col. Wolfhart Schmidt, "Vystrel — Hallmark of a Field Academy," ***Armee Rundshau***, December 1986, pp. 64-69, East Berlin, DDR.

5. Col. G. Vanyurikhin, "An Experiment is Needed," ***Krasnaya Zvezda***, September 5, 1986, p. 2.

6. Lt. Col. O. Nikonov, "Ideological Work: Facets of Renewal. Dialogue With A Computer," ***Krasnaya Zvezda***, May 13, 1987, p. 2.

7. Guards Maj. V. Platonov, "A Computer Changes Techniques: From the Experience of the Computerizations of Instruction for Air Defense Troops," ***Krasnaya Zvezda***, February 28, 1987, p. 2.

8. Maj. G. Torzhok, "They are Waiting for Instructions," ***Krasnaya Zvezda***, August 21, 1986, p. 2.

9. Unsigned reprint from ***Zolnierz Wolnosci*** (Poland), "The Computer Posts the Evaluation," ***Krasnaya Zvezda***, July 14, 1987, p. 3.

10. Col. (Res) V. Knyazkov, "Talks with Draftees," ***Voyennyye Znaniya***, January 1987, p. 44.

11. Col. I. Morozov, "Opportunities and Problems in Mastering Computer Technology," ***Kommunist Vooruzhennykh Sil***, April 1987, pp. 41-46.

12. Maj. B. Zotov, "Restructuring: Reserves for Acceleration in Military Enterprises," ***Krasnaya Zvezda***, April 28, 1987, p. 2.

13. A. Debrin, "The Computer in the Military Commissariat," ***Krasnaya Zvezda***, January 20, 1987, p. 2.

14. Capt. I. Zaslavskiy, "Computers — Not Just for Interior Decor," ***Krasnaya Zvezda***, April 12, 1987, p. 2.

15. A series of letters and articles appeared in the spring of 1987 in the English language ***Military Bulletin***, published in Moscow. Sergeyev's two-part series on C³I and Strategic Stability was complemented by Kulik on the reliability of strategic weaponry and a "troubled" letter signed by Ivanov and Severtsev, worrying over the possible disasters inherent in the Strategic Defense Program.

16. Maj. V. Shchepilov, "There are Enthusiasts, But. . . : What is Hampering Computerization of the Training Process at the VUZs," ***Krasnaya Zvezda***, April 3, 1987, p. 1.

Capt. Ralph Peters is the author of numerous published articles on military subjects. He entered the Army as a private in 1976, was commissioned through OCS in 1980, and has served extended tours with both the 8th Infantry Division (Mechanized) and the 1st Armored Division in USAREUR. Peters is a tactical intelligence officer and a native-rated German linguist. He is currently attending the Defense Language Institute.

A New Perspective on an Old Problem.

ESSAY

by Lt. Col. Edward L. Constantine, Jr.

Corps commanders today expect much more from their G2s and supporting MI organizations than did their predecessors in World War II or the Korean and Vietnam conflicts. While corps once were command and control headquarters without any significant base forces (e.g., artillery, engineers and logistics), over the years that changed as organic combat, combat support and combat service support assets were added to form the corps' base.

The intelligence collection assets *doctrinally* available to the corps' headquarters have improved significantly in terms of numbers and capabilities. However, the ability to process and *disseminate* intelligence information at the tactical and operational level has not kept apace. Technicians within the intelligence and the research and development agencies are working on the processing and dissemination problems, while others are trying to institute operating procedures to better meet the corps commanders' and their staffs' increased requirements for intelligence information. Two initiatives that have been institutionalized at I Corps — a planning cell and a joint targeting element (JTE) — deal with the Corps' doctrinal responsibilities for intelligence support to long-range planning and battlefield "structuring" in support of corps-level operations.

The I Corps' Planning Cell is a full-time organization located in the field at the Corps Tactical Operations Center (CTOC). It is comprised of both permanent personnel (G2 and G3 Plans) and other on-call staff planners. The cell meets in garrison when the staff is preparing for exercises and once a month (for a two-day session) in order to coordinate the planning effort for new missions or to perform maintenance on previously produced operations plans (OPLANS).

The cell's mission during exercises is to prepare the Corps' contingency plans and OPLANs based on the evolving scenario of the exercise. It responds to new missions received from higher headquarters or initiates

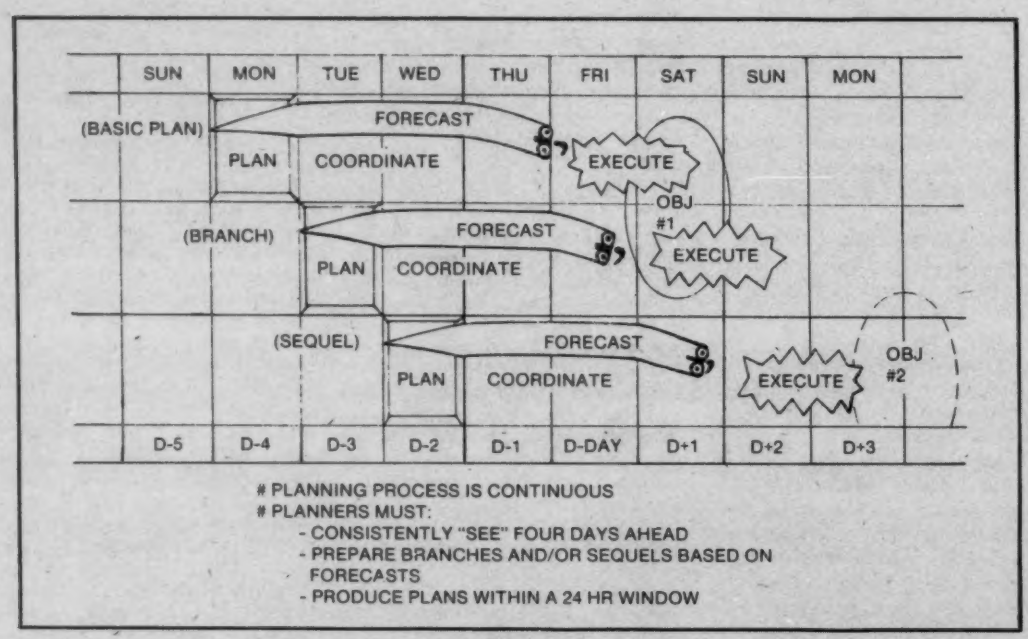


Figure 1

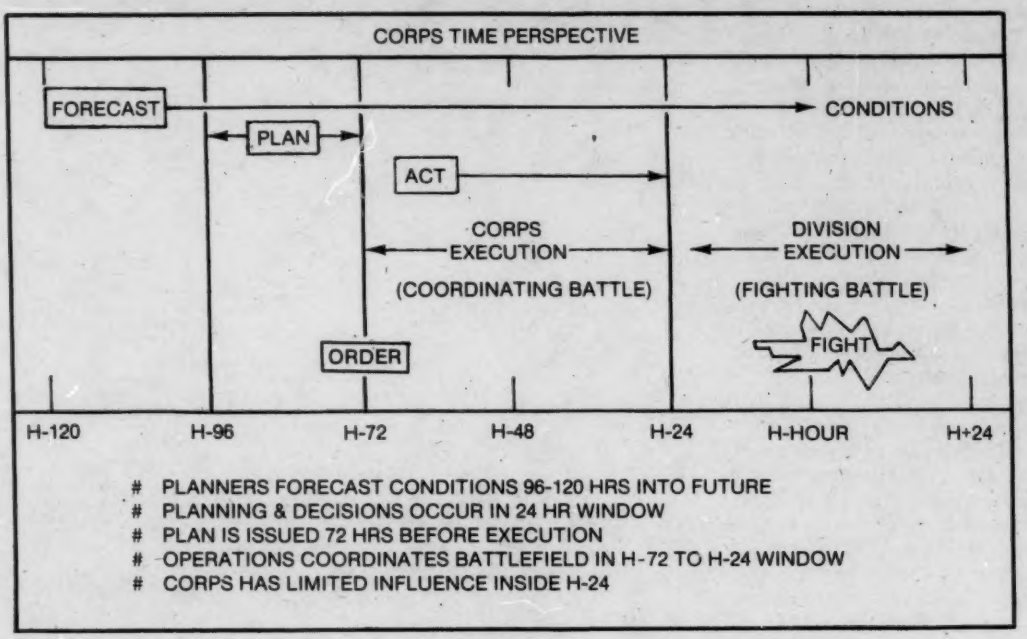


Figure 2

planning as a result of known/estimated changes in the enemy situation. The goal is to issue plans 72 hours before execution time.

Figures 1 and 2 show the Corps' tactical planning cycle. The Corps' intelligence team initiates the cycle by developing long range estimates or forecasts of the enemy situation (96-120 hours (+)). These forecasts are the catalysts for commander's guidance and intent from which the Plans Cell develops planning guidance, fragmentary orders (FRAGOs) or operation orders (OPORDs) for the major subordinate commands (MSCs). The end products of the planning cycle are either "branches" (variants of the base OPLAN/OPORD that result in the same end-state), "sequels" (follow-on missions or missions with a new or different end-state) or modifications/adjustments to an existing OPLAN/OPORD.

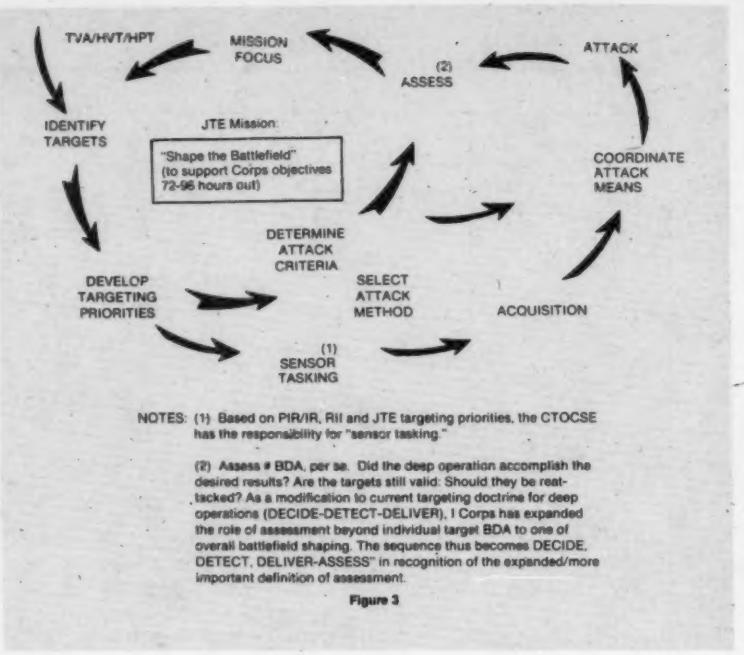
The Planning Cell goes through the entire decision cycle, from receipt of a new mission or the articulation of a new "what if" by the Commanding General, to the issue of an order, all within a 24-hour period (H-96 to H-72). Of particular note is the emphasis on time, rather than distance from the FLOT. The Corps' intelligence team produces estimative intelligence in support of the new/contingency plan and begins to collect information in response to the priority intelligence requirements/information requirements (PIR/IR) included in the planning guidance for the "what if," contingency, branch or sequel mission. These "future oriented" collection and production activities occur simultaneously with the intelligence team's efforts to support ongoing, current (close, rear and deep) operations.

The I Corps' JTE is also located in the CTOC and includes permanent and on-call members of the Corps' staff. It meets two to four times daily in the field. Its mission is to transform the Corps Commander's intent, as articulated by the Planning Cell, into a deep operations plan of action that shapes the battlefield to support the Corps' mission 72-96 hours out. These operations are directed against enemy forces not in contact and are intended to set the conditions under which future close operations will be conducted. For instance, targets may be selected to delay and disrupt an enemy force (time critical) from entering the close battle for a specified period.

The Corps' intelligence team is represented on the JTE by personnel from G2 Operations, G2 Plans, the MI Brigade's CTOCSE and, as required, from the Corps' Engineer Detachment (TOPO) and the Staff Weather Office. Figure 3 shows I Corps' JTE targeting process. Figure 4 describes the JTE's reconnaissance, surveillance and target acquisition cycles, which fall under the responsibility of the Corps' intelligence team. The Corps' Fire Support Element, in turn, provides a dedicated fire artillery analyst to perform target value analysis in the CTOCSE.

The JTE, like the Planning Cell, was instituted to establish a forward looking, anticipatory orientation for the Corps. The intelligence team plays a crucial role in the conduct of deep operations. The intelligence team has the responsibility for intelligence preparation of the battlefield development and maintenance, for identifying and locating high value and/or high payoff targets and for assessing the degree to which deep operations have shaped the battlefield as intended. Like the intelligence team's support to the Corps' Planning Cell, its support to the JTE occurs simultaneously with supporting current deep, close and rear operations.

It is obvious that corps' G2s and corps' MI brigades have a monumental task in just meeting the corps commanders' and their staffs' informational needs, not counting the demands of MSCs or higher headquarters. Until interactive processors (a la ASAS) and appropriate communications are fielded, the MSC commanders (especially the divisions and separate brigades/ armored cavalry regiments) of today will, unfortunately, continue to have



NOTES: (1) Based on PIR/IR, RII and JTE targeting priorities, the CTOCSE has the responsibility for "sensor tasking."

(2) Assess = BDA, per se. Did the deep operation accomplish the desired results? Are the targets still valid: Should they be reattacked? As a modification to current targeting doctrine for deep operations (DECIDE-DETECT-DELIVER), I Corps has expanded the role of assessment beyond individual target BDA to one of overall battlefield shaping. The sequence thus becomes DECIDE, DETECT, DELIVER-ASSESS" in recognition of the expanded/more important definition of assessment.

Figure 3

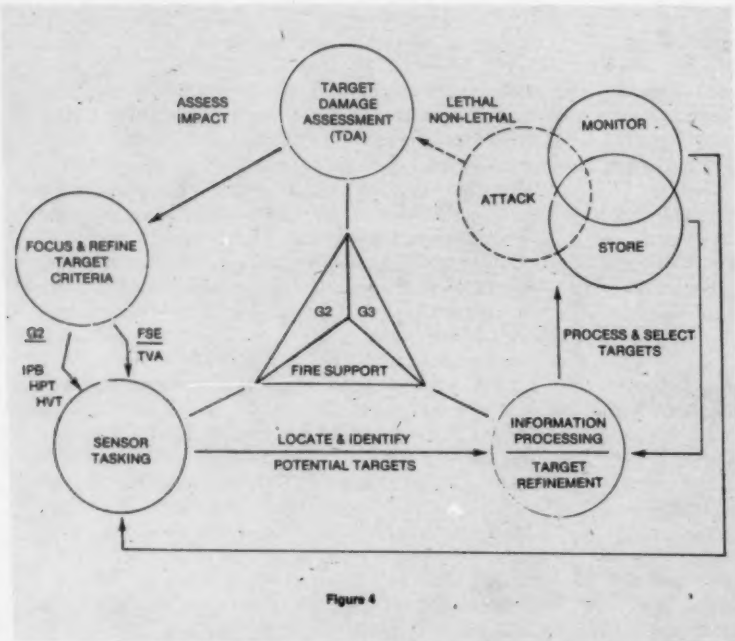


Figure 4

many of the same criticisms of corps-level intelligence support as did their predecessors. Like their predecessors, these MSC commanders will have to stress their own units (*all* of their units, not just their supporting MI battalions/companies) to do better in satisfying their own echelons' considerable information requirements. Similarly, MSC commanders will have to rely on their own unit liaison elements to the corps' headquarters to represent the subordinate commanders in all their informational needs, including intelligence.

This is Lt. Col. Edward L. Constantine's third article for ***Military Intelligence****. He was Chief, G2 Plans Branch at I Corps, Fort Lewis, Wash. He is currently serving "ON THE LINE" as the 6th Infantry Division (L) "ARCTIC LIGHT" G2.*

ASAS Intelligence Analyst/ Operations Specialist

ESSAY

by SFC John Ostman

The overwhelming introduction of computers into the processing and analysis centers of the intelligence community necessitates a serious look at our methodology and capability to handle the data that is now being made available. Technology is apparently surpassing our means to deal effectively with the new intelligence exploitation opportunities being presented. Potential development and future utilization of these opportunities are just now appearing. But before things progress too rapidly, and perhaps too far, it is time to consider what is being created and how to best manage the product.

The U.S. Army has an impressive array of signals intelligence/electronic warfare (SIGINT/EW) resources. A few of these systems available at division level can easily overload the intelligence system with information to the point where thorough analysis cannot possibly be performed.

As far back as 1975, the Tactical Reconnaissance and Surveillance Study-75 (TARS-75) identified several shortfalls and concluded that the intelligence system of that time could not do the job required. Since then we have reconstructed the division intelligence system into the Combat Electronic Warfare and Intelligence (CEWI) system with plans to automate many of their necessary operational functions. The CEWI concept purports to solve several of the problems brought forward in the TARS-75 study by consolidating the division collection assets into a CEWI battalion and creating a collection management section to control collection assets efficiently. We are seemingly on the verge of successfully controlling and tasking our collection assets through effective management techniques and automation. With the increasing amounts of intelligence now available to a decreasing number of analysts, a new training concept for processing and analyzing acquired intelligence must be developed. Not only a new concept, but a correspondingly new type of analyst, the 97G (counter-SIGINT specialist) is one possible solution to that problem. Currently, 97G training programs are fulfilling the type of analytical management required of an ASAS operator.

The abstract values necessary for the ASAS concept already exist in the training phase of the 97G Program of Instruction (POI). Those values must be realigned into the modern ASAS training concept of rapid assimilation and program operations.

We have not yet developed the analyst who can keep up with the automated and sophisticated data collection and manipulation devices that have been placed at his command. The existing system requires segmented work on different areas of the developing intelligence picture. Intelligence disciplines are separated to allow the specialized analyst to concentrate on his particular piece of the intelligence network. Only later, during time-consuming analysis, are the pieces assembled. With automation these intelligence pieces are available sooner than before, at a level closer to the point of origin. Current analysts, however, generally lack intuitive appreciation for a particular bit of data and don't understand its particular significance. The ASAS is designed to eliminate the lag time inherent with the compartmented procedures, thus producing near-real-time intelligence to the commander.

The intelligence community needs an analyst who can comprehend the intricacies of the numerous intelligence specialties. He must not only comprehend all intelligence disciplines but know how to manipulate the information derived from them. This analyst must be able to reach logical, intuitive conclusions based on a cursory review of the data being presented without the time consuming, in-depth analysis. Only then can he provide the supported commander with a clear, concise and timely intelligence picture on which to base accurate decisions on the extended battlefield.

The solution is an analyst training program currently in existence and co-located with the ASAS Training Center (ASASTC) located at Fort Huachuca, Ariz. The 97G POI for Skill Levels 1 through 4 can fulfill the needs required by the ASAS. With minor equipment realignment, the proposed ASAS analyst training program tasks parallel, and in many cases duplicate, the current training of the 97G.

The POI required would be designed to train potential ASAS analysts, operators and technicians in 98C (SIGINT), 98J (EW/SIGINT Noncommunications Interceptor), 96D (Imagery Analyst), 96B (Intelligence Analyst), as well as instruction on the Air Force's reporting of enemy air and ground support and air defense artillery. Another necessary portion of the course would be dedicated to computers, their programming and utilization.

The POI for the basic ASAS analyst/operator functions would range from 32 to 48 weeks. This would include selected teaching aspects of the intelligence specialties, as well as abstract analysis and inductive reasoning. This specialized training would fill the current needs for a true "all-source analyst" in both tactical and strategic environments. Additionally, this technically challenging job education would help to satisfy the soldier's need and desire for further education and job satisfaction.

The following is a composite by military occupation specialty (MOS) of related subjects that create the main areas of the ASAS course curriculum:

- 96R (Ground Surveillance Systems Operator)
- 96B (Intelligence Analyst)
- 96D (Imagery Analyst)
- 97B (Counterintelligence Agent)

- 98C (EW/SIGINT Analyst)
- 98J (EW/SIGINT Noncommunications Interceptor)
- 97G (Counter-SIGINT Specialist)

Based on front end analysis results and ongoing studies, proponents must evaluate current resident instruction/POIs at advanced individual training, Basic and Advanced Noncommissioned Officer Courses, and Basic and Advanced Officer courses to determine new training requirements or concepts necessary to support and integrate the program.

A complete review of current POIs is required to satisfy the integration of ASAS into proposed training doctrine. Additionally, course administrative data must be submitted for review and approval by TRADOC.

The strategy for ASAS training will follow the milestones developed for commissioned officer, warrant officer and enlisted training schedules. Courses of instruction, or portions thereof, which are scheduled to be trained in the appropriate time frame will be furnished and be incorporated into the ASAS training environment. The ASASTC will be used extensively to provide the specialized training environment to provide hands-on tasks and skills required of the specialty code (SC) or MOS. Students will be taught their particular job requirements both manually and by using the ASAS as a trainer.

This concept envisions a type of training that will evolve into the system itself, rather than the system merely being incorporated into training. For example, a specialized MOS will be created from the evolution of the training product.

Dedicated 97G personnel will receive ASAS training integrated into existing SC/MOS producing courses at all skill levels to the maximum extent possible with minimal cost and realignment of course activities. Whenever feasible, task-specific and ASAS training will be consolidated within the constraints of currently available course hours. Current co-location of the ASASTC with the 97G training environment enhances the integration of this proposed solution.

Critical tasks identified for training which cannot be incorporated into existing POIs will be trained in "ASAS unique" courses of instruction on an assignment specific basis or in the ASASTC facility.

The courses currently scheduled for Skill Levels 1 and 2 last 11 weeks. Skill Level 3 is nine weeks; ANCOC, Skill Level 4, is eight weeks in duration. By consolidation and realignment of the current 97G Skill Levels 1 and 2 course, a complete course of instruction for the "dedicated 97G/ASAS operator/analyst" can be conducted within the TRADOC Scheduling Program for FY 89/90.

This course must be designed to ingrain the necessary knowledge of multiple intelligence specialties so that the analyst can deduce the correct intelligence outcome or at least be able to project the proper sequence of events, without having to scrutinize every bit of data presented to him. The reasoning and methodology must become automatic and innate. These abilities can only be developed by intensive study and repeated exposure to the tools necessary to become a true "All-Source Intelligence Interpretation Specialist." I believe that the program I have outlined fulfills today's analytical needs and will better prepare us to meet the complex and automated needs of tomorrow's modern, extended battlefield. Without this type of intense education the system we are devising to assist us will never be able to realize full potential. ★

SFC John Ostman has served as the senior 97G, G3, 2d Infantry Division. He is a graduate of the Advanced Noncommissioned Officer Course and is an experienced instructor. His duties currently include development of the 97G Soldier's Manual. He is the Project Manager for Skills Qualification Test development for both 97G and 97E MOS. He is actively involved in establishing doctrine, performance measures and standards for the 97G MOS.

Writer's Award Nominees

In accordance with the guidelines for the **Military Intelligence** annual Writer's Award Program published in the January-March 1986 issue, the editorial staff is pleased to announce that Capt. Mary S. Brennan's article, "The Bolivian Connection," will be the nominee for April 1988 and Douglas H. Lincoln's article, "Intelligence Processing - The ASAS Connection," will be the nominee for July 1988. The winner of the 1988 Writer's Award will be announced in the April 1989 issue.

The BTR-80 and the Importance of Document Exploitation.

"The discovery of this article and its subsequent translation indicates the need for thorough document exploitation at all echelons of Military Intelligence."

by John A. Demboski, Jr.

The BTR-80 is the latest model in the series of eight-wheel drive Soviet armored personnel carriers that first appeared in the 1960s as the BTR-60P (and its modifications, the BTR-60PK and BTR-60PB) and later evolved into the BTR-70. Although the BTR-80 is in many ways similar to the BTR-70, there are a number of changes which have been introduced.

All of the improvements which were incorporated into the BTR-80 were made with two things in mind: Combat capabilities and survival and the ability to keep up with tanks and BMPs. To increase the combat capabilities of the vehicle, four new firing ports were added, in addition to the three already on each side of the troop compartment. Two are located in the forward section of the vehicle — one in an inclined panel of armor on the right side, enabling the soldier sitting behind the vehicle commander to fire, and the other forward of the commander's station firing to the front. The remaining two are located, one each, in the two overhead hatches. The two side doors, which are located between the third and fourth wheels on either side, have been expanded. The lower, triangular section, which in the BTR-70 was the entire door, now lowers down and forms a ramp. The upper half opens forward for quicker troop dismount. Six smoke grenade launchers have been added behind the turret.

The most important modification is the introduction of a fire protection system. It seems to be similar in design and purpose to the one in our M2/M3 Bradley Fighting Vehicles. A bilge pump has been installed to prevent the vehicle from sinking if it takes on water while swimming.

Improving the ability of the BTR-80 to keep up with tanks and BMPs has required a much more fundamental change in the vehicle. The two six-cyclinder gasoline powered engines have been replaced with one V-8, turbocharged diesel engine, which produces 256 horsepower. The increase in power over the engines of the BTR-70, has led to an increase in maximum road speed from 80 kilometers per hour to 85 kilometers per hour. This new engine has increased the cruising range of the vehicle without increasing the capacity of the fuel tanks. The need for extra fuel tanks was also eliminated due, in part, to increased fuel efficiency as a result of the installation of a diesel engine and increased engine efficiency as a result of turbocharging. The greater torque of the new engine increased the cruising speed. An engine preheater has been installed, which enables the engine to start at temperatures as low as -25°C (-13°F).

The change of engine has caused changes in the power train. The BTR-80 has a hydraulically controlled, double-plate friction clutch. The transmission has five gears, of which second through fifth are synchronized. However, the distributor box is the same as on the BTR-70 and BTR-60PB. This allows the retention of many spare parts which are already in the supply system and relieves the maintenance and logistic difficulties associated with the introduction of new equipment.

I obtained all of the above information from an article published by the Polish Ministry of Defense. Documents of this nature should be exploited by able linguists who have basic technical knowledge of the area(s) covered. This is illustrated by the following example:

The most important change in the BTR-80 over its predecessors is the replacement of two gasoline powered engines with one diesel engine. It is interesting to note, however, that nowhere in the article were the Polish words for "gasoline" or "diesel" used. The only indication of a change in engine type is where the text read that two engines with "spark ignition" had been replaced by one engine with "spontaneous ignition." Not only did I have to be linguistically skilled enough to detect the significance of these terms, but I also had to be technically knowledgeable enough to know that gasoline engines required a "spark" to ignite the fuel vapor, while diesel engines required proper heating and compression of the fuel vapor to cause "spontaneous" combustion. Although I was later able to confirm this deduction from two independent sources, it is nevertheless indicative of the degree of linguistic proficiency needed for this type of work.

The discovery of this article and its subsequent translation indicates the need for thorough document exploitation at all echelons of Military Intelligence. I happened to come across this article while researching materials for classes I was attending. I knew that there was no mention of a BTR-80 in any of the unclassified sources of information about Soviet equipment (most notably Field Manual 100-2-3, *The Soviet Army: Troops Organization and Equipment*), but what I didn't know was whether or not this information had already been collected at higher echelons. I decided to conduct a full translation for two reasons. First, there is always the possibility that such information could have "slipped through the cracks," either by not being collected through active intelligence operations or by being passed-over by MI assets that are specifically tasked for document exploitation. While this is not likely, it could happen. It is not wise to assume that items of potential intelligence value have already been discovered by someone else.

Secondly, even if this intelligence had already been collected at higher echelons, how long would it take for it to be managed and disseminated? While the article I translated was not technically a captured enemy document, providing maneuver unit commanders with intelligence that they did not previously possess was an effective way to show them how prepared my section was to support them in wartime. ★

John A. Demboski, Jr., is a civilian intelligence operations specialist with a military intelligence unit in the Federal Republic of Germany. He is a graduate of the Polish Basic Course at the Defense Language Institute Foreign Language Center, Presidio of Monterey, Calif., and of the Tactical Interrogation Course at the U.S. Army Intelligence Center and School, Fort Huachuca, Ariz. Demboski has an associate's degree from the University of the State of New York.

TACTICAL INTELLIGENCE SUPPORT to ADA

by Maj. Linda L. Linden

The unique nature of the Air Defense Artillery (ADA) mission requires specialized intelligence support that is not currently provided. Filling this critical gap requires an adaptation of the Intelligence Preparation of the Battlefield (IPB) process to the "third dimension" of the battlefield.

The Problem

Army air defense commanders generally operate in a cover-the-world, short-notice reaction mode. This applies to both divisional and theater units, with the result that ground-based, air defense weapons are rarely decisively concentrated against the air threat. This deficiency results primarily from a lack of effective air defense related intelligence. The air threat is usually described in terms of type of aircraft and expected sortie rates, which is of little value in weighting defenses to counter projected air attacks.

Historically, Army air defense has not been provided with, nor has it asked for, the intelligence assets and finished products necessary to fully support its operations. The reasons for this situation are varied. On one hand, air defense intelligence is often the purview of the Air Force, which produces information for its quick-reaction, defensive counter-air. At the other extreme is the ground-oriented focus of the Army. Despite the emergence of interest in air-ground operations (i.e., AirLand Battle), little attention is normally paid to the air dimension during enemy threat assessments. As a result, we tend to piecemeal our air defense systems over vast area defenses, point defenses around division and corps priorities and within maneuver task forces. No opportunity exists to employ and deploy these weapons in ways that synchronize their combat effectiveness in both protection and attrition missions. Effective IPB of the third dimension could solve this problem.

Operational Differences

The difference in operational reaction times between the Air Force and the Army is reflected in the way that tactical intelligence agencies deal with the problem of prediction. Air Force intelligence is geared to very short lead times in terms of giving specific answers to the standard question of "When, where and with what assets will the enemy attack?" In fact, warning times are usually measured in minutes and are extremely accurate, since they are based on activities of enemy aircraft already in the air. Army tactical intelligence, however, is geared to giving specific answers to the same question over a much longer period of time. This information is almost totally focused on ground operations projected over the next six to 48 hours. Little attempt is made to obtain precise details on expected enemy air support to these operations.

Air Force intelligence usually describes the air threat in operational or theater parameters. Broad categories include count of available long and medium range bombers, potential escort aircraft, sortie generation rates and theater-level targets. Defensive counter-air allocations are thus derived, and interceptor sorties are vectored at incoming raid formations with last minute early warning information. Ground-based air defenses, other than those in specific point defenses of the enemy air targets, are unable to effectively use this information.

"Despite the emergence of interest in air-ground operations, little attention is normally paid to the air dimension during enemy threat assessments."

Army ground-oriented intelligence takes little account of the projected air threat to their forces. Most of the fixed wing air threat is seen as an Air Force problem, with only attack helicopters considered by corps and divisions. Characterization of this rotary threat in terms of general numbers and sortie rates is of little value. Army air defense units assigned to protect ground forces must have a more sophisticated assessment of where, when and how the enemy can be expected to use his air power. Theater-level, ground-based air defenses operating forward of the corps rear boundary must also have this type of information.

The intelligence problem, then, becomes: Is it possible to produce air-oriented intelligence on a scale detailed and timely enough to be useful to Army air defenders? If it is possible, then what specific intelligence products are needed, when are they needed, who should produce those products, and what is the best means for dissemination?

The solution would seem to come from a coupling of the currently separated Air Force and Army threat prediction processes. Air threat assessments, usable for defensive counter-air and ground air defense systems, must probably come from the joint operational command level. For NATO, this could occur at the collocated ATAF-Army Group headquarters or through better coordination at the Allied Air Force, Central Europe (AAFCE)-Allied Forces, Central Europe (AFCENT) level.

The Air Defense Intelligence Mission

That intelligence, a key element of combined arms operations, enables commanders to use their combat power effectively to win battles is as true for

air defense as for other combat arms operations.[1] The air defense commander relies on accurate and timely intelligence to help answer two critical questions, both prior to and during hostilities:

How can air defense assets be most effective against enemy air operations? This translates into three priority intelligence requirements (PIR): What targets will the enemy attack by air? What routes will he follow to those targets? How will he attack the target once he arrives?

How can air defense assets best survive on the battlefield? This translates into one additional PIR: When, where and by what means will the enemy conduct surface-to-air missile (SAM) suppression?

The answers to these key questions form the basis for all tactical intelligence support to Army air defense. This information is crucial to the short-range weapons within the corps and division and to the longer range systems under operational control of combined air forces.

Intelligence Preparation of the Battlefield

IPB, adapted to the air dimension, must be able to tell the air defense commander when and where the enemy air forces will enter the air defense battle area. Situation and target development also apply to the air defense battle, but in specialized forms. Target development, for example, can be done from an enemy viewpoint and can thereby aid in developing the commander's list of air defense priorities.

Battlefield evaluation, the first step of the IPB process and critically important for air defense forces, defines the battlefield and focuses the IPB effort. Areas of operation and interest are viewed in terms of height (airspace), width, depth and time. ADA areas of operation are quite different from those of a ground maneuver unit. The area of operation for an ADA unit consists of that piece of ground which it physically occupies, along with the airspace for which it has defensive responsibility. The air area of operation is precisely delimited and strictly controlled in the form of coverage mission orders. Space and time restrictions are much more critical.

A graphic depiction of the air area of operation would be a three-dimensional volume of space with interior sections (prohibited or restricted firing areas) removed. Another difference is that ADA areas of operation usually do not extend beyond the forward line of own troops. Also, conventional time-phased planning considerations do not generally apply. Finally, the ADA air area of operation includes the airspace above a ground unit's area. The ground portion is always located within some other unit's area. This consequently requires close coordination with affected ground maneuver units whenever the ADA unit moves.

The area of interest for an ADA unit is best defined in terms of enemy airfields, probable friendly targets and the routes between those points. This is quite different from a maneuver unit's area of interest, which is defined in terms of geographic area contiguous to that unit's area of operation. For example, divisional short-range air defense battalions have legitimate interests in all enemy attack helicopter bases from which strikes into their divisional sectors may reasonably be expected, as well as in probable helicopter routes into the battle area. These same battalions also have an interest in certain fighter-bomber bases, even though such bases may be located far beyond a divisional area of interest. Theater air defense units have points of interest stretching from the forward edge of the battle area far into enemy territory.

Several unique features serve to identify the ADA battlefield. First, it is far more extensive than that of a similar size ground unit, often ranging beyond the reconnaissance and interdiction planning line. Second, although it has great depth, the two-dimensional orientation at that depth is one of scattered points, not total area. Finally, the battlefield becomes three-dimensional for purposes of connecting these points (enemy airfields, friendly targets, entry into air defense sectors, etc.), and for bringing air defense fire to bear on the enemy. It is this unique battlefield that must be analyzed within the IPB process.

The product of battlefield analysis is the statement of the area of interest. This must be formulated by the ADA unit S2 and should probably take the form of a list of specific airfields along with a definition of a mission boundary. For example, an area of interest boundary definition for an ADA unit situated in West Germany might be the portion of the international German border which enemy aircraft would have to cross to enter the unit's area of operation. For a unit providing vital area defense, the area of interest boundary may be that unit's radar coverage limit. Thus, an appropriate area of interest statement for an ADA unit consists of two distinct but related parts. The first is a list of scattered points within enemy territory (airfields). The second is a line or series of points close to or within friendly territory which will serve to focus possible enemy air vectors from the airfields. Once the statement of the unit's area of interest is approved by the commander, it is forwarded to the next higher echelon, where it serves as a guide for supporting intelligence requirements. The challenge to the ADA unit S2 is to state the area of interest so clearly and concisely that it can be both readily incorporated into the next higher echelon's intelligence plan and also readily passed on to appropriate higher or adjacent intelligence agencies.

Terrain analysis, the next step in the IPB process, has applicability for all ADA units.[2] The purpose of an air oriented terrain factor matrix is to determine which operations (enemy air and friendly air defense) are influenced by terrain. In general, terrain factors have greater effect on air operations the closer the aircraft get to the target. Thus, for rotary wing close air support (CAS) operations, which generally have a point of origin relatively close to their intended targets, terrain affects the entire mission, from start to finish. Fixed wing CAS usually originates somewhat further from the intended target, so the initial effects of terrain are reduced. Similarly, battlefield air interdiction (BAI) and deep interdiction missions are less affected by terrain for a longer portion of their flight profiles. Except for extremes of terrain, terrain factors only begin to significantly affect enemy air operations at the point where the aircraft enter ADA areas of operation. Terrain factors become critical if the intended target is close to that point. If the target is still some distance from that point, then the effects of terrain factors increase gradually from the point of entry into the ADA area of operation to the point of final target approach. Thus, if an ADA unit's mission is vital area defense, then it is necessary to do a very detailed terrain factor matrix for the approaches to that vital area. If the unit's mission is theater coverage, then such detail is probably

not needed.

Terrain factors impacting on enemy air or friendly air defense functions include vegetation, elevation and built up areas. Enemy air functions impacted by terrain include navigation, communications, observation and fields of fire (ability to see the target and drop ordnance on it), and cover and concealment (ability to hide from hostile air defense). The primary friendly air defense functions impacted by terrain include observation and fields of fire (ability of radars to see and missiles to fire), cover and concealment, and communications. Friendly air defense is also constrained by the standard terrain factors which affect all ground units for purposes of movement.

A comprehensive terrain factor matrix will show which terrain factor overlays are necessary. Extensive overlays for ground unit movement are already available from division and corps G2s. In other instances, the unique criteria required for air operations will necessitate that new overlays be produced. Some of these overlays may already be available but used for other purposes. Air defense clutter and coverage diagrams, for example, may serve very well for vertical and oblique line of sight (LOS) overlays. The resultant obstacle overlays should be combined, then the total obstacle picture analyzed from both sides. Blue air defense obstacles will often represent favorable avenues of approach for enemy air. Some extreme terrain obstacles may force enemy air into higher (and more visible) altitudes or may force selection of a different route altogether.

The specific terrain analysis products required by an ADA unit should probably include, as a minimum:

- Combined obstacle overlays for friendly ground movement (available from the G2 of the nearest division/corps).
- Combined obstacle overlays for enemy air, consisting of vegetation, elevation and built-up areas overlays. These add up to a low-level air corridor overlay and can be done as a special project by the servicing engineer topographic unit.
- Vertical and oblique LOS overlays that should represent friendly ADA LOS. Any noted areas of sparse coverage will then become possible mobility corridors for enemy air. An analysis of these overlays would serve to point out which ADA sites must be suppressed to facilitate enemy air operations and which survivability measures should be ordered for such sites.

Weather analysis should be approached using the same procedures as for terrain analysis. First, determine which weather factors affect friendly air defense operations and which ones affect enemy air operations. Using a comprehensive listing of these factors and the functions affected by each, a weather factor matrix can be prepared. A second matrix must also be done, showing the weather factors affecting friendly air defense operations.[3]

The weather factor matrices can be as simple or as complex as time and resources allow. It is important to isolate and concentrate on essential factors, especially to aid in go/no-go assessments.

The weather analysis products compiled for the use of the ADA unit S2 should take the form of a series of seasonal overlays. The specific overlays needed will be those identified by the weather factor matrices. Each set of seasonal overlays should be done in a series of altitude slices. The number and limits of the altitude slices will vary according to the ADA unit's mission.

"ADA areas of interest must be continuously reevaluated and redefined as the unit's mission, resources and the focus of enemy air operations change."

Threat evaluation, the next step in the IPB process, determines how the enemy would employ air operations relative to doctrine and training, if he were not constrained by terrain and weather considerations. The product of this step is a file of doctrinal templates for the various pertinent enemy operations. The following doctrinal templates are required:

Fixed Wing CAS
Rotary wing CAS
Fixed wing BAI
Airborne operations
Air assault operations
Airmobile operations
Deep air interdiction operations
SAM suppression operations

Each of these templates must address all known doctrinal aspects of the given operation. One crucial part of each template must be the depiction of enemy airspace control measures; these are the ultimate key to arriving at probable enemy air corridors, at least in the vicinity of the forward edge of the battle area. These templates are not currently available, but their production is urgently needed.

In *threat integration*, the final step of the IPB process, the doctrinal templates are adjusted to account for terrain and weather constraints throughout the battlefield area, significant battlefield events and enemy activities. For air operations, these events might include such things as enemy air reconnaissance flights against friendly air defenses or establishment of forward operating bases. The final product represents the best estimate of the enemy's future courses of action. In peacetime, the key elements necessary for successful threat integration are precise, detailed and continuous analyses of exercises. Since ADA battalions and brigades do not generally have direct access to this information and since they do not have the resources necessary to exploit it, it is essential that higher levels do the appropriate exploitation. Other requirements for peacetime threat integration include the analysis of pertinent Soviet doctrinal writings and the analysis of research and development trends.

Wartime Considerations

In peacetime, the IPB process should be done in as comprehensive and detailed a manner as possible, making full use of all available resources and taking into account all possible contingencies. In wartime, the process must be carried out in a much shorter time, and the procedural focus shifts primarily to threat integration. There are particular changes that are pertinent to ADA units.

ADA areas of interest must be continuously reevaluated and redefined as the unit's mission, resources and the focus of enemy air operations change. Terrain analysis becomes less formal. Close coordination with the nearest friendly ground unit is necessary to update changes in obstacles to friendly ground movement. Changes to vertical/oblique LOS caused by the redeployment of SAM units will also serve to change the entire terrain analysis

picture.

Weather analysis must depict variations on a daily (or even more frequent) basis. However, the same general factors and altitude slices still apply for the entire ADA area of interest. Doctrinal templates become more situational. The most critical ADA intelligence needs in wartime concern situational templating, target development from the enemy air perspective and the overall threat integration process. Depending on his particular mission, the ADA commander must know which targets in his area of operation are likely to be attacked by enemy air; whether and where the enemy is likely to pass through his area of operation en route to any targets; the likelihood and type of enemy air insertions; probable objectives for those insertions and the likely routes to them. These factors must be analyzed and disseminated quickly to allow the ADA commander to react to the changing situation. There are a number of specific intelligence questions that must be answered:

What is the enemy's capability to conduct specific air operations within the next 12 to 24 hours?

What indications are there of the enemy's intent to conduct specific types of air operations within the specified period?

What are the probable enemy air targeting priorities for the next 12 to 24 hours?

What enemy intelligence efforts have been specifically directed against friendly SAM units within the past 12 to 24 hours? Is there an attack pattern discernible from those intelligence efforts?

Air Defense Intelligence Support Agencies

The intelligence system that supports ADA requirements is less clearly defined than that which supports true ground or air operations. Although there is an obvious requirement for close coordination between Air Force and Army commanders, staffs and intelligence producers, the procedures are not well established. The problem is compounded by the fact that air defense units have extremely meager organic intelligence assets. The following supporting intelligence agencies have been categorized in terms of their relative resources and focus and suggested responsibiiities:

ARMY AIR DEFENSE (includes Army Air Defense Command (AADCOM) G2, and ADA unit S2s).

Define the specific ADA intelligence requirements for peacetime and wartime. AADCOM should formulate these requirements. Mission-specific data can then be provided by the subordinate unit S2s. AADCOM should identify areas where ADA resources are inadequate and submit requests to appropriate agencies for specific product support.

Maintain a current file of IPB products. These products include all the pertinent overlays and templates previously described. Each ADA unit S2, as well as AADCOM G2, should maintain those products pertinent to the unit's mission.

Perform final integration and analysis of products received.

Coordinate to ensure the continuous exchange of intelligence among the appropriate agencies. The bulk of this responsibility falls on AADCOM. However, ADA unit S2s must also maintain intelligence liaison with nearby Army and Air Force intelligence sections.

ARMY (includes division and corps G2s, echelons above corps intelligence centers and Central Army Group, Central Europe).

Corps and division provide appropriate terrain and weather overlays. During wartime, provide updated overlays as available.

Provide analytical resources to aid ADA units in prediction of enemy CAS/BAI and airborne/air assault operations. This should include analysis of probable friendly air targets and objectives as well as indications of imminent operations.

Provide doctrinal templates of enemy airborne/air assault operations and attack helicopter operations.

AIR FORCE (includes U.S. Air Force, Europe, 4ATAF and AAFCE).

Provide, in a manner timely enough to allow repositioning of SAM units, predictions of probable enemy air avenues of approach in conduct of fixed wing CAS/BAI and theater air operations.

Provide doctrinal templates of enemy fixed wing operations.

Summary

There are serious shortfalls in tactical intelligence support to Army air defense. The root of the problem stems from the unique nature of the Army air defense mission: It is a ground-based weapons system which must respond to an air threat. The most promising solution to the problem appears to be a conscientious application of the principles of intelligence analysis, in light of the ADA commander's intelligence needs and system operational characteristics and limitations. The IPB process is the foundation of tactical intelligence analysis — it can be successfully adapted to the air dimension.

The intelligence data, doctrinal procedures and organizational framework are all available to correct this critical situation. It remains only for senior Army air defense commanders and senior intelligence officers to emphasize the need and allocate the necessary resources. We cannot afford to undermine the crucial role of Army air defense by failing to provide them the same high degree of intelligence support provided to other combat arms. ★

Footnotes

1. FM 34-3, *Intelligence Analysis* (January 1986).
2. Ibid, chapter 4.
3. FM 34-81, *Weather Support for Tactical Army Operations* (August 1984), Appendices A and C.

Maj. Linda L. Linden, a military intelligence officer, is the S2 of the 10th ADA Brigade. She wrote this article in collaboration with Col. Donald E. Nowland, Commander, 10th ADA Brigade.

Training Notes

Teampack Operator Training

by Capt. Lynn M. Burwell and Capt. Jiyul Kim

The greatest challenge for leaders in today's peacetime Army is to conduct effective training and to prepare our soldiers for war. We all recognize the importance of training, and the Army has declared 1988 the Year of Training. This article will cover some specific ways in which leaders of tactical electronic intelligence (ELINT) units possessing the MSQ-103 A/C Teampack system can enhance the challenge and realism of their training program.

Intelligence skills are technical and highly perishable. They must be constantly rehoned. The training load and requirements of intelligence soldiers in tactical units are doubled due to the additional requirements for tactical proficiency (covering not only field skills but the demanding task of continuous maintenance as well). There are also significant requirements for collective proficiency in leadership, team level cohesion and the ability to operate in a united fashion as part of a direction finding (DF) baseline. Many MI units have incorporated an effective training program to hone the technical and tactical proficiencies of most of their soldiers. However, we believe that a serious imbalance exists between the quality of available training opportunities and training aids for those soldiers with communications intelligence (COMINT) related MOSs (98C/G) and the 98J ELINT MOS soldiers. This is a function of priorities in tactical units and the low density of 98J soldiers. A divisional MI battalion has fewer than 20 98J soldiers authorized and only 12 of them are actually assigned to operate the three Teampacks.

Various training aids and training opportunities currently exist for the tactical 98J Teampack operators. REDTRAIN provides TDY funds for training at fixed sites worldwide. FORSCOM has developed, with Georgia Tech Univ., a series of software packages for the MICROFIX called the Tactical ELINT Trainer (TET). (See ***Military Intelligence***, October-December 1983, p. 18.) Perhaps the best of the trainers is an onboard software package for the Teampack which can feed a scenario of a limited number of ELINT targets to an operator for identification.

The most serious deficiency of these training items is that they do not provide an adequate integrated training environment for the Teampack operator, team and section. The first two examples do not place the soldier in his true wartime environment. The soldiers are not operating their wartime equipment with all the contraints, stress and problems of field conditions in logistics and communications. They also fall short in training the operators as a team. The third example places the operator in his equipment. However, not only are the software scenario inputs highly limited in scope, but the inputs do not allow the Teampack section to conduct realistic DF operations. After all, isn't DF the *raison d'etre* for a Teampack section?

Some MI units have taken advantage of force on force exercises at the divisional or higher levels. With proper coordination, friendly radars on the opposing force may be turned on, allowing the entire divisional ELINT system to be exercised. This is a good option if available, but divisional force on force exercises do not occur very often, and there are certain difficulties as well. REFORGER, one of the largest of such exercises, normally limits radar use due to its possible political sensitivity when used near the East German or Czechoslovakian borders. There is also the problem of targeting only friendly radars, but that is a relatively minor consideration if you can conduct ELINT operations at all in a major exercise.

B Company (Electronic Warfare), 501st MI Battalion (CEWI) of the 1st Armored Division in Germany is fortunate in that it regularly participates in frequent deployments to the border. These Live Environment Training (LET) exercises are designed to stress the Battalion in its field operations and to hone the technical proficiency of all its units. For forward deployed units overseas, a LET is probably the best option for realistic, challenging, integrated and credible training. However, its biggest drawbacks are funding and picking the right time for deployment. In the current atmosphere of funding constraints, such expensive deployments will become rarely experienced luxuries.

Thus, we are left with the requirement to develop valid and continuous training for our Teampack operators but with serious constraints in funds and quality training aids. In our personal involvements with this problem, we have taken maximum advantage of various training options available in the 1st Armored Division and Germany to develop a series of ELINT training events.

Between July 1986 and March 1988, the Teampack section of B Company was involved in no less than 10 ELINT training events. Of these, three were LETs, two were deployments to a fixed border site in the V Corps area with the Teampacks, two were divisional Suppression of Enemy Air Defense (SEAD) exercises, two involved exclusive use of the Threat Radar Target Generator (TRTG) and one was a joint exercise with the Target Acquisition Battery (TAB) of the Division Artillery (DIVARTY) command and its FIREFINDER radars.

There was no overall training strategy in this series of training events, because most of them were short term opportunity training. Some were integrated training events with the Battalion (LETs) or Division (SEAD), while others were set up exclusively for Teampack training (fixed site, TRTG, FIREFINDER). The point of these training events is that they were varied enough and frequent enough to maintain the tactical and technical proficiency of the Teampack operators, teams and section as a whole.

The fixed site deployment involved only the Teampack section with a TCAE augmentation to a real world threat environment. It supplemented the LETs while also allowing the ELINT "players" of the Battalion to work out specific technical and operational problems without external distractions. Since the 501st fields its Teampack section as a separate platoon with a dedicated lieutenant for platoon leader and an extra

98J for platoon sergeant, such independent deployments also exercised the platoon's entire leadership chain.

We were particularly excited about the SEAD exercises and the discovery of a unique training aid, the TRTG. In addition to the U.S. air defense radars, the TRTG was used for the first time in Europe to train ground based ELINT systems. The TRTG is a radar emitter system consisting of an electronic shelter mounted on an M880 truck with an associated generator trailer. It was originally developed for the Air Force to activate the radar detectors in aircraft to train pilots in evasive maneuvers. The utility of the TRTG for Teampack training is its ability to emit the electronic parameters of the GUNDISH of a ZSU-23-4, the PATHAND of an SA-4, the STRAIGHT FLUSH of an SA-6 and the LANDROLL of an SA-8. The TRTG is capable of emitting signals on the move and changing its signals at whim. We felt that we found an ideal Teampack training aid which was cost effective, flexible, realistic and credible.

There are only three Army owned systems in Germany. These systems are based at Hohenfels and owned by the 7th Army Training Command (ATC). They are operated by German civilians. The German operators were not only exceptionally cooperative, but genuinely excited at the opportunity to work in a new situation. The Air Force owns additional systems in Europe as well as other locations in CONUS and Korea. The current availability of these systems is, therefore, limited at best. However, a consolation for Teampack units is that the TRTGs will probably be available when flying conditions are poor. All associated costs (TDY for operators, fuel, maintenance) for the use of the TRTGs in Germany are borne by 7th ATC.

The discovery of TRTGs resulted in the development of some unique training opportunities. During a major winter exercise in early 1987, the TRTG was reserved for dedicated support of the Teampack platoon. Using various scenarios of moving and stationary targets, we were able to exercise the Teampack baseline ELINT DF operations. Some two months later, the TRTG was brought to local training areas to work against a locally established baseline. Our objectives were not only to conduct good ELINT training but also to further familiarize the TRTG operators in working with the Teampacks for future training.

In the fall of 1987, a large scale SEAD exercise was held by the 1st Armored Division. It involved the division headquarters, the CAB headquarters, one entire attack helicoper battalion, DIVARTY, the air defense battalion, TRTGs and the Teampack platoon with TCAE augmentation for tasking and analytical support. The three day exercise was designed to test the feasibility of target acquisition with the Teampacks and its coordination into fire planning for SEAD in conjunction with an actual insertion of the attack helicopter battalion as a deep strike force. The results were highly promising with future iterations for refinement of the concept already being planned. More importantly for the Teampack platoon, a realistic training exercise, keyed to ground based ELINT with the full play of the Division, resulted in unparalleled training benefits.

We used one additional innovation to enhance Teampack training. In a joint exercise with TAB, the FIREFINDER radars were deployed at unknown locations for the platoon to target. The objectives of the exercise were two fold. First, we wanted to provide a new target for the Teampack platoon to operate against while refining the platoon's DF procedures. They thus became familiar with two additional friendly radars which may be encountered in war. Second, the FIREFINDER operators were able to test specific operating modes and frequencies to minimize detection by threat ELINT collectors. The competitive element provided an incentive for both units to perform at peak levels.

By far the most exciting training aid we have discovered is the TRTG. It provided a realistic and cheap alternative to border deployments. We were able to exercise the Teampack platoon under full field conditions. There are relatively minor drawbacks: limited inventory of radar simulations, lack of security clearances for the German operators and incompatibility of the communication systems (the TRTG is equipped with a UHF aviation radio and an unsecured VHF/FM radio).

Leaders of Teampack units must take advantage of every opportunity for fully integrated training. We have shown some of the ways in which the 501st MI Battalion EW company approached and tackled the problem of Teampack operator training. We encourage all units to look for the nearest TRTG resources and give them a go. Don't let the consequences of inadequate training haunt you in the future.

A New NCO Leadership

by SFC John E. Taylor

Coinciding with the organization of the Military Intelligence Branch into a Corps, an NCO Academy was formed at Fort Huachuca, Ariz. The new Corps Command Sergeant Major, CSM Robert H. Retter, had a unique concept for an NCOA.

Retier's idea was to build an NCO leadership that would in turn greatly enhance the overall professionalism and effectiveness of the new MI Corps. To do this, he needed a competent senior NCO to run the new Academy where generations of future senior NCOs would be trained. To implement his concepts, he handpicked CSM Thomas Crosby, a veteran of many important leadership positions. Instead of an officer in charge, Crosby was made the Commandant of the NCOA, thereby giving him the actual authority to implement Retter's new concepts.

The most noticeable of these new concepts in MI NCO training was the consolidation of all MI ANCOCs at Fort Huachuca, where formerly they had been spread around the country and divided by MOS. Retter's idea was threefold. First, to cross familiarize each MI MOS with the activities and abilities of the others. Next, to expand the friendships and acquaintances within the Corps. Retter's experience had shown him that the more interpersonal relationships established, the smoother running the organization. Finally, he wanted to expand ANCOC from a purely technical course to a true leadership academy. As these concepts were implemented by Crosby, a rather unique and challenging curriculum was developed.

Leadership was to be the main focus of the Advanced NCO Course, so the question was asked, "What does a Senior NCO need to function and lead in today's Army?" Soldier's who wish to

lead must first learn to master themselves. So, in addition to the traditional inspections and drilling, the class schedule included such challenges as the Confidence Course and the Leadership Reaction Course. To enhance the NCOA students' knowledge and ability in a group setting, the new Army Small Group Instruction (SGI) method was adopted. In SGI, the emphasis is on sharing experiences and knowledge with the students themselves acting as "facilitators." This focuses the responsibility for learning on the students themselves, by teaching them how to think not what to think. With the adoption of SGI methodology, the ANCOC instructor's role changed. "The instructor is no longer an endless fountain of facts on doctrine." Instead he coaches, facilitates and serves as a role model for leadership. In the ANCOC classes using SGI, Retter's ideas first began to pay off, as E6s and E7s shared their unique experiences gained from worldwide missions served over their 10 to 15 years of service.

While leadership is the main focus of the NCO Academy, it is by no means the only course taught. The curriculum for ANCOC, for example, has not only a basic class on each of the MI skills (such as deception operations, intelligence preparation of the battlefield, etc.) but also important platoon sergeant professional skills. These professional skills include NBC operations, management of troops in extended field conditions, training management and many others.

Platoon defense classes are taught both in the classroom and in the field. Retter's vision of the MI NCO is someone at home in the field as well as the field station. During ANCOC, senior NCOs participate in a week-long Field Training Exercise which begins with a long "ruck march." During the week, the students stage patrols, hike through map and compass, orienteering and land navigation courses and get "hands-on" training in many other areas. This week in the Arizona desert is as physically demanding as it sounds.

In accordance with the vision of the new MI NCO, and to prepare for this FTX, regular PT is held five mornings a week. As in all the other classes, leadership is continually taught by allowing the students to conduct the PT sessions. A new, more vigorous MI soldier is encouraged by incentive programs such as the "Iron Man" goal of 300 or more points on the APR Test and organized group games such as soccer. Preparation for the FTX rucksack march is done during weekly ruck marches. The ANCOC classes even "ruck-it" to classes every day. Their cadence can be heard as they pass through the post in sharp formation.

Those units with returning graduates of the MI NCO Academy had better be prepared for changes. If Retter has his way, a better and more professional NCO is in store for the MI Corps. As he said when addressing a group of ANCOC students, "The MI warrior is taking over!" So, while it may not be happening overnight, rucksacking may well become a common MI pastime.

Small Group Instruction in ANCOC

by Carolyn Saunders

In December 1985, two faculty members from the Sergeants Major Academy, presented a five-day workshop on small group methodology to the instructors of the U.S. Army Intelligence Center and School's Advanced Noncommissioned Officer Course (ANCOC). This was their introduction to a new method of training that would cause important changes in the way ANCOC would be conducted. The Sergeants Major Academy, which had been using small group instruction (SGI) for a number of years, was to provide the model for these changes.

The instructors began this training with an uncertain and somewhat doubtful attitude towards SGI which changed throughout the week. They began to feel more at ease with the subtle shift in their roles from total provider of information to facilitator of learning. By the end of the week they had become enthusiastic supporters of the SGI process. They began to see this as a way to move students to higher levels of thinking.

With SGI, the students are not asked to simply recall information but, instead, are asked to apply what they already know, to analyze new information and to integrate the new with the old. They are asked to evaluate information and solve problems in a nonthreatening classroom environment. This gives the students practice in the type of thought processes that will prepare them to function in leadership positions in the field.

Since the focus of SGI training is on how to think, not what to think, instructors could no longer present the familiar slide-and-lecture class that had long been a prevalent method of instruction. Instead, they had to create a learning environment in the small group which encouraged open discussions, involved detailed practical exercises, presented opportunities to explore and challenge current doctrine and familiarized students with the publications that are the tools of the senior NCO.

In January, 1986, the first group of ANCOC students experienced small group instruction. According to the instructors, the students were somewhat overwhelmed by the increased responsibility. They complained that it involved "too much work" but, in the end, said that this ANCOC was the best Army training they'd ever received. According to one instructor, students liked SGI because they had more freedom in the classroom. They felt freer to argue points presented in the lessons, to contribute their own experiences to the discussion or to ask what they perceived to be "dumb" questions — questions about basic points of information that students in a traditional classroom often feel inhibited about asking.

Another instructor listed a number of advantages she felt this method of training gave the students. She agreed that the students were happier with the greater freedom of the SGI classroom. She said that freedom led to greater student involvement in the learning process. Because of the way ANCOC course material was being presented, the students were better able to relate training to real job situations. She pointed out that students learned a great deal from each other, and they developed valuable skills in leading groups that would be useful when they went back to the field. Overall, she thought that more real learning was taking place.

However, as instructor changes occurred, the ANCOC leadership identified a need for ongoing training for new instructors in facilitator skills. A knowledge of group dynamics and SGI philosophy was essential if an instructor, who was trained in basic instructional

skills, was to make the transition from "platform" instructor to small group leader. The Chief, ANCOC perceived that lack of formal facilitator training could result in having instructors who simply "lectured to smaller groups."

With basic methodological differences in mind, the Staff and Faculty Development Division (SFDD) worked with the Chief, ANCOC to develop training for the new ANCOC instructors. The result was a workshop conducted with SGI methodology in which instructors explored such topics as the philosophy of SGI, process and content within the SGI structure, group norms, group development, the communication process, intervention and leadership issues for the team leader. The goal of the workshop was to have instructors thinking of themselves as team leaders first, instructors second.

This workshop has been presented to several groups of instructors and, as they progress through the training, they discover one very important point. Not only does SGI require a change in the way they view instruction, but it will also require a change in the way their students view instruction. It requires students to become actively involved in the learning process and to accept the responsibility for their own learning. They have to be willing to accept the premise that learning is a life-long responsibility — and it is the responsibility of the individual who wants to rise to the top of his or her career field.

That is why the creation of the proper learning environment becomes one of the primary tasks of the group leader. Students have to progress beyond "protective motivation" — performing only at a safe level and merely well enough to get by — into the area of "achievement motivation" — when they are willing to take risks in order to perform at their highest level. They will make this progress if they are able to share ideas and experiences in informal interaction while, at the same time, they are being challenged mentally.

On the surface, SGI might appear to make the role of the instructor easier. However, experienced SGI leaders know this isn't true. For example, it is not essential that discussion leaders be content experts in all areas, although they should have some preparation in the content and expertise would certainly contribute to the quality of learning. Therefore, their role is different, but not easier. Since responsibility for learning rests with the students, the leader must skillfully guide them to many different sources of expertise.

However, this methodology, as is the case with any instructional method, is no better than the person who uses it. On the other hand, solid grounding in the rationale and uses of SGI is necessary for their maximum effectiveness. Thus, it is important for instructors to be well trained in the use of the method. It is also necessary for an instructor to have a clear understanding of the learning objectives. It is the instructor's responsibility to lead the students to an achievement of those objectives.

Finally, it is important for an instructor to understand, accept and be comfortable with the premises embodied in the rationale for SGI. These state that:

- a group of reasonably capable adults can learn on its own if the instructor will let it,
- it is not essential for an instructor to control every input into a discussion in order for it to be an effective learning experience, and
- maximum learning probably occurs when a group breaks its dependence upon its instructor and assumes responsibility for learning.

Instructors who accept these premises and undergo the professional growth from platform instructor to small group leader find they also gain as much from their experiences with the group as do the students.

Leader/Coach

by Capt. Dennis A. Thornton

Situation: *The 1986 National Collegiate Athletic Association (NCAA) Basketball Championship game, Indiana vs Syracuse. It's Indiana's ball, down 73-72 with 10 seconds to go in the game. Daryl Thomas, one of Indiana's best players, has the ball but is guarded closely by Derrick Coleman of Syracuse.*

Four years of developed instinct took over. It was almost as if Thomas could hear Indiana coach Bobby Knight's voice inside his head: "Shot-fake Daryl, shot-fake!" He shot-faked. Coleman didn't budge.

Almost any player in that situation, time running out, national title at stake, would have panicked. But all those dreary nights of practice in Assembly Hall paid off now. The voice was inside Thomas' head: "Don't force a bad shot. Never force a bad shot."

Thomas looked and spotted Smart cutting from the top of the key towards the baseline. Calmly, as if it were just another scrimmage, he flipped the ball back to him. Smart took one dribble to his left, flew into the air and shot . . . Smart was slightly off balance as he went up from sixteen feet, but the shot was true all the way.[1]

Indiana won the game and the National Championship with that shot. But what difference does that make to us, soldiers in the U.S. Army? Well, believe it or not, we can learn to be better leaders by applying some of the techniques of successful coaches like Bobby Knight of Indiana University. He wins consistently because he sets attainable goals, motivates his players, enforces standards and provides realistic training.

Goal Setting

Knight sets definable and attainable goals. In 1985 the coach and his players set a goal of winning 19 games for the upcoming season. This specific goal was excellent, since the prior season had been disastrous for the team. They won only 15 games and had not received an NCAA tournament bid. Nineteen wins were attainable and would most assuredly get the team into the NCAA tournment. *Notice that the team goal was not to win the Big Ten Championship.* They knew this was not a realistic goal since Michigan State, Michigan and Purdue had better teams, at least at the beginning of the season. This quantitative goal was measurable and allowed the players to focus their attention and energy in the right direction.

As leaders, we must also be goal oriented. As a Collection and Jamming Company Commander, an appropriate unit goal for a year might be an average of 270 on the Army Physical Readiness Test (APRT) for all soldiers in the company. Another goal might be a fully mission capable rating on all Army Training and Evaluation Program (ARTEP) tasks during an annual evaluation. These goals focus energy and efforts in training for soldiers and their leaders.

Motivation

Knight is also a tremendous motivator. He uses both positive and negative reinforcement to get his players to

meet the team goals. Players learn to accept the fact that for four years they will be terrible basketball players most of the time. Ted Kitchel, who graduated in 1983, said that he played on the four worst teams in the history of Indiana basketball. Yet they won three Big Ten Championships and the National Championship in 1981.[2] This negative approach is designed to keep the players from becoming overconfident, so that they will give their best efforts at all times. However, Knight is not all negative. His most positive side is his genuine care for his players. While a coach at Army, he left West Point for three days during the season to be with a player and the player's mother after the young man's father died of a heart attack. That player, Mike Krzyzewski, now a very successful coach at Duke Univ., said: "Bob Knight is the guy in the military who jumps on the grenade to save everyone else without giving it a second thought."[3] Knight's players give extra effort because they know that he will be there if they really need him.

In the military, if a leader genuinely cares for his soldiers, then the result can also be high motivation. Nothing impels a soldier to work harder than knowing that his leaders genuinely care for him and his family. The quickest way to kill the motivation in a unit is for a leader to be arrogant and look out for his own needs before those of the unit. But, do not be afraid of practicing a little negative reinforcement. Do not be afraid to criticize a soldier who is not giving a total effort in striving towards unit goals. Surprisingly, soldiers like to have perimeters within which they know they can operate. If you have the moral courage to speak up and point out deficiencies in soldiers' attitudes, then the overall motivation of the unit will benefit.

Enforce Standards

If a player comes to Indiana to play basketball, he knows he better follow all the rules. Basically, there are two sets of rules: The NCAA's and coach Knight's. Each player is expected to adhere to these guidelines or suffer the consequences. For example, if a player cuts classes, then he will be off the team for several weeks or, in the case of a repeat offender, for good. The theory is that Knight's brand of basketball takes tremendous self discipline. If a player does not have the discipline to go to class, then he will not have what it takes to play for Knight. During the 1984-1985 season, Knight dismissed one of his best players for cutting class, even though the player met NCAA academic requirements. The season turned out to be one of the worst in Indiana history. However, for Knight, standards are standards.

As leaders we must enforce not only the Uniform Code of Military Justice but also unit standards of appearance and discipline. Even when a soldier who is indispensable to the unit is guilty of breaking a unit standard, we must enforce the rules. Nothing kills a unit quicker than leaders who do not enforce standards. The key to unit discipline is having soldiers do what they know is right, even when leadership is not around. If you enforce unit standards consistently and fairly, then soldiers will do the right thing.

Realistic Training

The final key to success for the Hoosiers is that practices really prepare them for games. The Knight system is a highly pressured practice designed to teach and stress the players, both physically and mentally. On the surface, Knight's comments to players during practice seem cruel. However, they are designed to prepare the players for the pressures of the game. When fans scream and yell, the players can still think and execute the game plan. He also uses extensive repetition and rehearsals. The reasoning here is to teach the players exactly what they are to do in each situation and then repeat the drills until actions become second nature.

Army training is not that much different. Training must directly relate to preparing the unit for its wartime mission. A high pressure environment like the National Training Center is excellent for stressing soldiers, thereby helping to prepare them for combat. By the way, there is nothing wrong with repetition. Common task training followed by consistent crew drill training sets the stage for unit success.

It is no accident that coach Knight is successful. Through goal setting, motivation, enforcing of standards and proper training, he consistently wins. As leaders in the U.S. Army there is no reason why we cannot get the same results. Have a game plan which calls for hard, realistic training coupled with strict adherence to unit standards. Get your soldiers to focus their energy towards unit goals. Hopefully, we will be as successful as Knight when the referee blows the whistle for our game to begin.

Footnotes

1. John Feinstein, **A Season on the Brink** (New York: Simon and Schuster, 1987), p. 348.
2. Ibid, p. 37.
3. Ibid, p. 202.

Collection Management

by Capt. Gary Darby

"Collection management" or "crisis management?" For those working in the highly complicated and complex world of tactical collection management, "crisis management" is often a better term for their job. To support the AirLand Battle Doctrine of "looking deep, shooting deep," today's tactical collection manager (CM) has to be a multifaceted expert.

The CM must understand the collection capabilities of all organic collection systems and units. The CM must know enemy order of battle, capabilities, limitations and collection signatures and vulnerabilities. He must explicitly understand the battleground in terms of its effects on the enemy and its effects on friendly collection operations. He should completely understand the communications network within his organization and the communications network to higher and adjacent elements. As a member of the "targeting triad" of the G2, G3 and FSE, he must know targeting criteria and procedures.

The CM should be thoroughly familiar with collection strategies and how, when and where to use such strategies. He must understand the request and reporting procedures for collection support from theater and national collection agencies. In many units, particularly division level, the CM is the developer of the unit's overall reconnaissance and surveillance (R&S) plan. As such, he has to plan, manage, orchestrate and synchronize literally dozens of collection assets to produce a viable R&S plan for the commander.

Sound unmanageable? No, just very difficult. But, help is on the way. The U.S. Army Intelligence Center and School, Fort Huachuca, Ariz., provides a 10-day course entitled, "The Collection Management Assignment Specific Module" on tactical collection management. The course is primarily intended to serve those individuals slated to fill collection management positions at regiment, division or corps level. Personnel going to an all-source production section or MI brigade or battalion operation positions at regiment, division or corps level and who will be working closely with CM personnel will also find the course beneficial. The course also serves as Phase One instruction for soldiers en route to Phase Two Enhanced Tactical User Terminal Instruction at Fort Devens, Mass.

The TRADOC course name and number is: Collection Management Assignment Special Module, 3A-F55/233-F16. RESERVATIONS FOR CLASS SEATS ARE HANDLED BY THE DEPARTMENT OF THE ARMY, NOT FORT HUACHUCA. Point of contact at Fort Huachuca for addition information is Capt. Gary Darby or SFC Sandra Weaver, autovon 821-1013/1014 or commercial (602) 533-1013/1014. Correspondence may be addressed to:

Commandant
U.S. Army Intelligence Center and School
Attn: Director, DSSM, Collection Management Section
ATSI-SM-IE-CM
Fort Huachuca, AZ 85613-7000

Eyes Behind the Lines

by Capt. Steven Powell and Capt. William Soderberg

Training in the Federal Republic of Germany evokes images of long columns of tanks and armored personnel carriers rolling through medieval towns. While that picture was a part of CARAVAN GUARD '88, the exercise was notable for a very modern addition — the highly successful introduction of V Corps' newest intelligence asset, the Long Range Surveillance Unit (LRSU).

LRSUs are the Army's new approach to an old problem — determining the enemy's strength and intentions through direct observation. Today is not the first time LRSUs have been part of the Total Force. Their lineage can be traced back to World War II. They were disbanded in the early 1970s, when the Army came to believe that aerial and ground-based electronic collection could replace them.

The growing complexity of electronic countermeasures to friendly collection, coupled with the potential loss of air superiority and interdiction in the enemy's rear area, prompted a relook at the LRSU concept. This resulted in the adoption of the LRSU as another key set of eyes and ears for the tactical commander.

LRSU assets have been established at corps level (one company) and division level (one heavy platoon-size detachment). Each is capable of operating cross-FLOT for several days deep in the threat rear and reporting back on enemy units' strength; equipment; command, control, communications and intelligence facilities; and intentions.

E Company, 51st Infantry Regiment, attached to the 165th MI Battalion (Tactical Exploitation) is V Corps' LRS company. It is complemented by LRS detachments in both the 108th MI Battalion of the 8th Infantry Division and the 533d MI Battalion of the 3d Armored Division.

E-51st Infantry, by far the largest of the LRSUs in V Corps, consists of a headquarters platoon, a communications platoon and three LRS platoons. Each of these have six six-man teams. In accordance with the MTOE, every member of the company is airborne qualified, and all infantry officers and NCOs are Ranger qualified. LRSU leaders receive specialized training at the LRS Leaders Course at Fort Benning, Ga. Training focuses on communications, planning, air operations, patrolling, digging "hides," land navigation, physical fitness, enemy equipment recognition, intelligence reporting and survival.

In Europe, additional specialized training is available through the international Long Range Reconnaissance Patrol School at Weingarten. The school is a NATO-subsidized training facility for all NATO LRS units.

Twelve LRS teams were fielded to provide direct support to both 8th Infantry Division and the 3d Armored Division and general support of corps-level requirements. The master base radio station deployed with the 165th MI Battalion tactical operations center in the vicinity of the Corps main command post. The rear base radio station deployed to Stuttgart, approximately 200 miles away, in order to take advantage of the distance factor required in the high frequency skywave communications used by the teams. The teams transmitted to the rear base radio station; the rear base radio transmitted to the master base radio station. Team members at the master base radio station handed reports to personnel at the battalion tactical operations center who in turn sent them, via FM radio burst, to corps.

In preparation for insertion "behind enemy lines," each team went into three-day isolation. During isolation, each team was briefed on its specific

mission and target area, as well as insertion and extraction routes. They were also given the latest intelligence estimates and resupply procedures, and they coordinated escape and evasion procedures.

Under the concept of isolation, teams were physically separated from one another in order to prevent compromise of additional teams, should any team be captured. The final phase of the isolation was the brief-back. During this briefing, team members recited their mission and instructions in detail to the company and battalion commanders in order to ensure that the members understood all aspects of the mission and had planned for all contingencies prior to insertion.

The teams were inserted by UH-60 Blackhawk helicopters. During the first phase of the exercise, the majority of the LRS teams were dedicated to supporting the 3d Armored Division G2 with intelligence collection. 8th Infantry Division used its LRS teams to directly support its own intelligence collection effort.

After insertion, the teams were essentially on their own. Having been assigned target areas to survey, it became necessary for the teams to select the best vantage point from which the target could be observed while, at the same time, minimizing their chances of being detected by the enemy.

For the short period of time during both phases of CARAVAN GUARD '88, the teams subsisted on their own manpacked rations and supplies. Longer patrols would require either prepositioned supply caches, aerial resupply or local procurement for survival. Such critical self-reliance while operating behind enemy lines places a demand for outstanding fitness on LRS soldiers because they must carry everything they need on their backs. CARAVAN GUARD '88 reinforced the validity of maintaining a demanding physical training program for LRS units as each team member carried an average of 110 pounds. The soldiers did find a need for some equipment improvements, such as specialized, light-weight clothing and sleeping gear. The need for improved intra-team communications was also identified.

When Phase I ended, Corps teams had sent more than 275 messages on enemy activity or units through the base radio stations and battalion tactical operations center to the Corps G2. Reporting was continuous throughout the first phase and proved to be extremely accurate. Sightings by LRS teams were often verified by either ground-based intelligence collectors or by aerial observation platforms.

The lessons learned from intelligence reporting procedures coupled with changing mission requirements led to a reallocation of LRS teams during Phase II of the exercise. During Phase II, the teams were airlifted out of their initial areas of operation and reinserted into new surveillance areas. After the final portion of the exercise, Phase III, the teams were extracted and returned to a secure area for debriefing and recovery.

In the final analysis, the Corps LRS teams, exposed to the freezing winter weather and placed in hostile territory, transmitted more than 300 reports back to the Corps G2. The teams provided the only around-the-clock intelligence collection throughout the operation; approximately 50 percent of the combat information on CARAVAN GUARD '88 was attributable to LRS reporting.

Reserve Notes

Second Army Success Story

by Sharon David

The Army's first and only Reserve military intelligence (MI) command, activated provisionally in 1985 by Second Army, has proven its worth by assuring training for soldiers in one of the Army's most critical and technologically reliant branches.

Second U.S. Army Military Intelligence Command brings under a single command and training umbrella 18 Army Reserve MI units in the Second Army area. Headquartered in Atlanta, Ga., Second Army has training and mobilization responsibilities for all Reserve Component units in eight Southeastern states, Puerto Rico and the U.S. Virgin Islands.

Before the MI command was made permanent in December 1987, MI units were commanded by various Army Reserve Commands (ARCOMs). Training funds and training opportunities didn't always make their way down the ladder to the MI units which by their very nature required "unique people, unique training and a heavy maintenance progam for that training."

Placed under non-MI branch senior commands, MI units, with their special MI training requirements, were often misunderstood or put on a back burner. However, since activation of Second Army's MI command, more than 1,100 soldiers each year have been trained at an appropriate consolidated training facility.

The S3 section has invented a couple of special programs such as the Military Intelligence Special Training Element (MISTE) and the Military Intelligence Language Acquisition Program (MILAP). These programs have been so successful that other continental Armies intend to use them as models for their own programs. The MISTE program concept has been adopted by FORSCOM because it maintains a high level of MOS qualification and saves at least $25,000 per person.

MISTE program's creator recognized that the Army Reserve had a difficult time training soldiers in MI "hard skills." His program identified active component soldiers who already had those skills prior to their ETS and recruited them for Reserve MI positions.

Another example of where the new intelligence organization has paid off is in the area of security clearances and MOS qualification. Before the MI command was created, there were only 13 secret clearances within the command's units. This made it very difficult to get soldiers trained. Now, after two years, 122 secret clearances have been granted. Top secret clearances applied for and approved jumped from 85 in 1985 to 501 in 1987.

The type of training that MI soldiers

are now getting involves skills in some of the most technical material known to modern armies: electronic warfare, ground surveillance radar and counterintelligence. The schooling for these skills is extremely expensive, especially when dealing with language-oriented training. The MI requirement for linguists is high, and soldiers spend at least one year per language at the Defense Language Institute; some MI soldiers speak up to four languages.

Despite having adequate training funds available, the command still has difficulties getting Reservists to attend these long courses at the Defense Language Institute. It's important to remember that Reservists have civilian job obligations and few, if any, can say to their employer they have to go away to school for an entire year.

This is where the MISTE program comes into its own. Instead of having to qualify Reservists in a foreign language, MISTE gets soldiers who are already fully language-qualified and ready to go to work.

Finally, and most importantly, the command has qualified soldiers that they not only can train but who can contribute also. They are able to send units and soldiers to national intelligence agencies where they can learn and use their expertise. That is great satisfaction, not just for the soldiers and their units but for the staff as well.

Enlisted Notes

Excellent Soldier Program

The 1st Battalion, U. S. Army Intelligence Center and School has a new program which recognizes staff sergeants and below who are "total soldiers." The Excellent Soldier Program takes all aspects of soldiering into consideration. Everything is considered from duty performance and appearance to not having any adverse administrative actions during the year. This includes meeting the height and weight standards as prescribed in Army Regulation 600-9, *The Army Weight Control Program*.

The program features a silver and a gold award. The awards depend upon the soldier's scores obtained in firing the M16A1 rifle, the Skill Qualification Test, the Common Task Test and the Army Physical Fitness Test. Those soldiers who meet the silver and gold standards receive a battalion Excellent Soldier Program Certificate and have their names added to a plaque on display in the 1st Battalion area. Since the program began three months ago, 23 soldiers have qualified for one of the awards. Those soldiers who qualified for the silver are encouraged to better their scores and "aim for the gold."

Soldiers are required to meet the following standards:

Category	Silver Standard	Gold Standard
Rank	Staff sergeant or below	Staff sergeant or below
APFT	250 or higher	280 or higher
M16 Rifle	Sharpshooter or higher	Expert
CTT	All go's	All go's
Height and weight	Standard in AR 600-9	Standard in AR 600-9
Appearance	Consistently exemplary	Consistently exemplary
Performance on duty	Consistently exemplary	Consistently exemplary
Discipline	No Article 15s or adverse administrative action in the last year.	

Leadership Notes

By Force of Personal Example

by Capt. David K. Taggart

Leadership is the one thing we can count on in the U.S. Army.

There isn't going to be any more time. You can work those 18-hour days, but in reality, time is finite. You only have so many hours in a day and so many days in a week. We've got all the time we're going to be given, and there isn't any more.

It looks like there are going to be fewer resources available, and their availability changes with time. If you've looked at the national scene, you know that in the future the Army will either be doing "more with less" or "less with

less." The bottom line is that resources — equipment, money, people — are not going to increase.

Which leaves us with leadership. We can count on it. We've got it now, no outside source can cut it, and we can, on our own, increase the quality and quantity of what we've got.

There's been a lot of talk in the professional publications about what it takes to maintain a professional army, but I would maintain that the United States has always had a professional army. Our numbers have been increased with conscripted soldiers from to time to time, to be sure, but we've always had the solid professional core. If you look back now, our budget and training problems can't even begin to compare with those in "The Iron Years" of the 1880's and 1890's or the years between the World Wars. But it was in those very same years of "constrained resources" that the sword of leadership was forged for our Army. We ended up with Pershings and Eisenhowers.

Somewhere out there in the Army today is a lieutenant colonel with the ability and potential to be promoted seven grades in seven years if our country needs him. We've always been capable of producing such men, and Lord help America if the day comes when we cannot.

Leadership starts with the vision — the leader's view of the organization. It is the leader's responsibility to create the command climate that enables him to implement the vision. How does he do this?

The BE-KNOW-DO concept from Field Manual 22-100, *Military Leadership*, is a good point of departure. You examine what a leader is, the knowledge he has and what he does with it. BE-KNOW-DO relates directly to our senior-level leadership doctrine.

In his classic novel of the U.S. Army, **Once An Eagle**, Anton Myrer has his protagonist, Sam Damon, refer to "leadership by force of personal example." The BE of BE-KNOW-DO refers to the leader's personal attributes. He becomes the standard bearer for his unit. He establishes the groundwork for what the unit will be. To do this he must be the role model for the unit and develop the ethical climate for the unit to operate in.

This is where the vision starts. It springs from the leader himself. There is a set way of obtaining it — there is no schoolhouse practical exercise with accompanying solution sheet to provide the example. Rather, the leader takes his own values and experiences within the institution of the U.S. Army and uses them to provide the forceful, "personal example."

This provides the leaders with his perspective on the unit: the KNOW of BE-KNOW-DO. The ability to utilize this perspective to apply the leader's storehouse of knowledge is vital. The leader's knowledge must cover a wide variety of subjects. Technical and tactical proficiency provide the requisite knowledge of the operational art that is essential to fight the AirLand Battle. His historical perspective enables him to draw upon the lessons of past commanders.

In addition to his operational and historical knowledge, the leader utilizes his knowledge of his own unit — its strengths and weaknesses, record of achievements, capabilities and motivation, and esprit-de-corps. It gives him a unique perspective on his unit, one that only he can have. The knowledge of the unit is essential to implementing the leader's vision.

Finally, the concept of "leadership by force of personal example" rests upon just that — the personal example. This is the DO of BE-KNOW-DO. What the commander does will reflect the sense of purpose of his unit. The old axiom of, "Units do well those things the commander checks," holds true. The frantic phone call announcing, "The Old Man's in the motor pool!" has a galvanizing effect upon subordinates. The commander's actions give direction to the vision.

The leader's actions can and will motivate soldiers and directly establish his command climate. Actions *do* speak louder than words, and the expression of values that soldiers can actually *see* serves to instill esprit de corps and motivation.

"The force of personal example" is vital to implementing the vision. It encompasses the BE-KNOW-DO doctrine of FM 22-100 and fits the operational concepts required for command. The leader is a role model for values and ethics. He is a skilled professional, with the ability to train his subordinates. And finally, he is a warrior, able to take the unit he has formed and lead it to victory. ★

from the Commander

(Continued from page 2)

command and the individual soldier, working in concert, can do much to correct these problems. Commanders and supervisors can instruct new officers and noncommissioned officers on the proper care and importance of their individual file. They can emphasize the need for current quality photographs and assist junior personnel in obtaining their first official photo. Rating officials can and must personally verify height and weight data and ensure through clear and specific job titles and duty descriptions that their personnel are given full credit for their leadership and technical responsibilities. Officer senior raters should comply with DA and TAPA guidance on constructing their senior rater profiles. The individual soldier can and must insist upon chain of command compliance with its responsibilities and must become personally involved in updating the OMPF. Soldiers must personally ensure that their files are updated with a current high quality photograph, health and fitness data and information on professional and educational achievements. Soldiers at all levels must never assume someone else will do it for them. In the final analysis, it will require our individual and collective efforts to correct these OMPF problems. Let it not be said that as individual soldiers of Military Intelligence we did not do our part in the management of our own careers. ***Toujours en avant* — Always out Front!**

PROFESSIONAL READER

Human Rights in Nicaragua Under the Sandinistas, From Revolution to Repression, U. S. Department of State, 246 pages.

This important document fills much of the void about Sandinista repression left uncovered by the news media. In this objective, unadorned presentation of abuse cases, the reader is led to the conclusion that the Sandinistas are the authors of their own internal troubles.

In its compilation of case studies, the book describes much more than just the abandonment of human rights by the Sandinista government. Strongly reminiscent of the Cuban experience under Fidel Castro, it unfolds the violent methods of a Marxist-Leninist government crushing any whisper of dissent and establishing house-to-house absolute control.

The book is logically organized into two sections. The first relates various aspects of human rights in Nicaragua. It covers the human rights commissions in the country from the independent commission to the Sandinista-controlled organization that the outside world sees. It then describes the controlled organizations that carry out repressive measures. These include the legal system, the "defense committees" (a form of neighborhood watch except the targets are not criminals but the neighbors themselves), the insidious "divine mobs" of hoodlums and, of course, the armed forces. The chapters continue with violations of individual, civil and political rights. Following a final chapter on the "ethnocide" of the Atlantic Coast population, the section concludes with a short statement of the betrayal of the Nicaraguan people by its government.

The first section provides a working background of a young totalitarian regime acutely sensitive to criticism. The second section studies a handful of diverse subjects. It consists of 20 annexes, written by non-U.S. government sources. One of the most compelling written documentaries is at Annex 2, the Sofonias Cisneros Leiva Case. This case study outlines the story of a school principal who expressed his concern to a group of parents about a Sandinista imposed curriculum promoting "class hatred, violence, faith in weapons and a warlike spirit." For this, Cisneros found himself apprehended, stripped and personally beaten by Comandante Lenin Cerna, head of the Sandinista secret police. Despite the attempted humiliation, Cisneros retained his faith and dignity as well as his state of mind to record an interesting insight into prisoner handling at the most feared of the Sandinista prisons. Cisneros summarized what may be the most common sentiment in Nicaragua, "The Nicaraguan people subjugated by atheistic totalitarianism and materialism, have already paid a very high price in terror, blood and pain to free themselves from an inhuman system . . . and it is a cruel and bloody joke for it to fall under another system even more brutal and repressive than the one that cost 50,000 lives to vanquish."

The one major defect in this book's content is the lack of substantive comparison between the Somoza and the Sandinista regimes. Too many people brush off the horrors that all Nicaraguan citizens now face, believing that the current dictatorship is no worse than the last. Such a comparison would have helped the reader focus the data into a meaningful evaluation. For example, if it had been worth the risk of 50,000 lives to overthrow Somoza, how do the Nicaraguans feel now?

Annex 11 on the Miskito Indians could have been used as a comparison between regimes. Condensed to a sentence, an author in this annex states, "The Sandinistas . . . have brought more suffering and repression in six years than has occurred during all the preceding 85 years of invading state regimes from Zelaya to Somoza."

The most controversial issue concerning this unfortunate country in the minds of U.S citizens is the freedom fighters or "Contras." Much of the information in the case studies gives the lie to the Sandinista claim that the Contras cause all their woes. The Sandinista government acknowledged that the resistance forces only became a viable force in late 1981. Yet, many of the brutal histories in this book occurred before that time.

What becomes clear to the discerning reader is that the Sandinistas created their own woes by introducing disincentives to work or invest; attacking other political parties including their allies; and driving single individuals, entire villages, even an Indian nation to such desperation that they have joined the resistance forces.

The book uses a variety of sources as diverse as Amnesty International; the Permanent Commission on Human Rights of Nicaragua (CPDH); members of the Nicaraguan Bishop's Conference; the "72 Hour Document" (secretly written in 1979 by the Sandinista leadership, it outlined how to construct communism in the country); and the firsthand accounts of many defectors from within the Sandinista organization. A surprising feature, Annex 19, lists numerous addresses of political, religious and labor organizations in Managua who will provide more information on the true position of Sandinistas toward human rights.

In a totalitarian society, it is a simple matter to control the internal and international media by screening the journalists and controlling their movements. The information received by the outside world on Nicaragua has not been immune to manipulation by the Sandinistas. For that reason, **Human Rights in Nicaragua Under the Sandinistas, From Revolution to Repression** provides a badly needed, credible counterbalance.

Capt. Mary S. Brennan
Washington, D.C.

A Test for Technology: The U.S. Army in Vietnam by John D. Bergen, Washington, D.C.: U.S. Army Center of Military History, 1986, 515 pages, $26.00.

This book, which is part of the U.S. Army in Vietnam series, covers the history of the conflict in Vietnam from a communications standpoint. It begins with communications support to OSS teams during World War II, then guides the reader through the Military Assistance Program to aid the French, the American advisory effort of the early 1960s, the massive buildup of U.S. combat forces during 1967-68 and finally the phase out of U.S. forces by 1972.

As the scale of operations increased, so did the need for communications, both on an area-wide basis as well as for tactical operations. As equipment was introduced numerous problems surfaced, some due to physical conditions and many due to poor planning or bureaucratic blunders. Since this book covers a large time frame, the 1962 reorganization of the Army and the creation of the Army Materiel Command and its impact on procurement of communication equipment are discussed in some detail.

The book has many good as well as bad points. Each chapter begins with a brief summary of the situation in Vietnam before going into details. Another good point is the introduction of both intelligence reporting systems as well as enemy communication systems in use. One entire chapter is devoted to enemy communications.

The book, however, fails to discuss NATO and the Warsaw Pact which controlled much of the U.S. military thinking of the period and provided the incentive for new equipment. The book also lacks good photos and a detailed description of the communications equipment being discussed.

This is not an easy book to read for anyone who is not familiar with Signal Corps operations and equipment. Professional intelligence officers should read this book to gain an appreciation of the prob-

lems faced in installing a communication system in a low intensity conflict, as well as for a description of some Communist Bloc communication equipment.

Lt. Col. William L. Howard
Largo, Fla.

Tunnel Warfare, The Illustrated History of the Vietnam War by Tom Mangold and John Penycate, New York: Bantam Books, 1987, 158 pages, $6.95.
Riverine Force, The Illustrated History of the Vietnam War by John Forbes and Robert Williams, New York: Bantam Books, 1987, 158 pages, $6.95.

These books provide an interesting juxtaposition of two different and at the same time similar facets of the Vietnam conflict. Well illustrated with maps, photographs and line drawings, these books vividly depict two truly "unconventional" aspects of that peculiar war. Remarkably free of factual errors and costing less than $10 a copy, these books are well worth the price and time spent by the military professional or historian.

Personnel who fought the subterranean war described in **Tunnel Warfare** were by trial and error isolating themselves from the high-technology Army. During this process, they relearned the art of carefully planned face-to-face combat without benefit of fire support and weapons superiority. Volunteer tunnel rats were soon to discover that in this "old-fashioned" form of combat, individual strength and cunning counted far more than massive air and artillery support. This battlefield's basic tools were the flashlight, the pistol and the knife.

Tunnel Warfare may very well be subtitled, **The Tunnels of Cu Chi**. This is the title of a previous work on this subject by the same authors. They record the frustration of U.S. Army commanders fighting a foe who appeared to vanish into thin air. They disappeared into labyrinths of underground tunnels designed for hiding and fighting. No knowledge or experience base existed upon which to carry the fight into the tunnels. Clearly, a new military skill had to quickly develop. This eventually would require the creation of a specialist soldier unique to the Vietnam War — the tunnel rat.

The final chapter in the tunnel war began with the halt in the bombing of North Vietnam. The high-flying B-52s were soon flying their missions inside South Vietnam. High explosive, 500 and 750 pound bombs completed the tunnel rats' mission of denying the use of tunnels to the enemy. B-52 strikes could often be seen and heard for miles. These strikes created earthquakes that collapsed the sturdiest tunnel walls making them unusable and irreparable.

Simultaneously, the Navy was to learn analogous lessons in its conduct of the river campaign. Fighting in the Delta, along the coastal waters and on the mouths of large rivers, the Navy was to wage a campaign with weapons completely separate from the sophisticated technology used to control the oceans. Missile-carrying frigates and nuclear powered aircraft carriers provided little benefit to small craft fighting countless skirmishes in "brown water" far from the sea.

Riverine Force chronicles the U.S. Navy's effort as it built upon and then expanded the limited French experience. The Navy, like the Army, had no established military doctrine to guide its conduct in this new form of combat. However, U.S. sailors were quick to adapt an odd assortment of various pleasure craft to the "brown water war" fought in the mud, creeks and canals of South Vietnam.

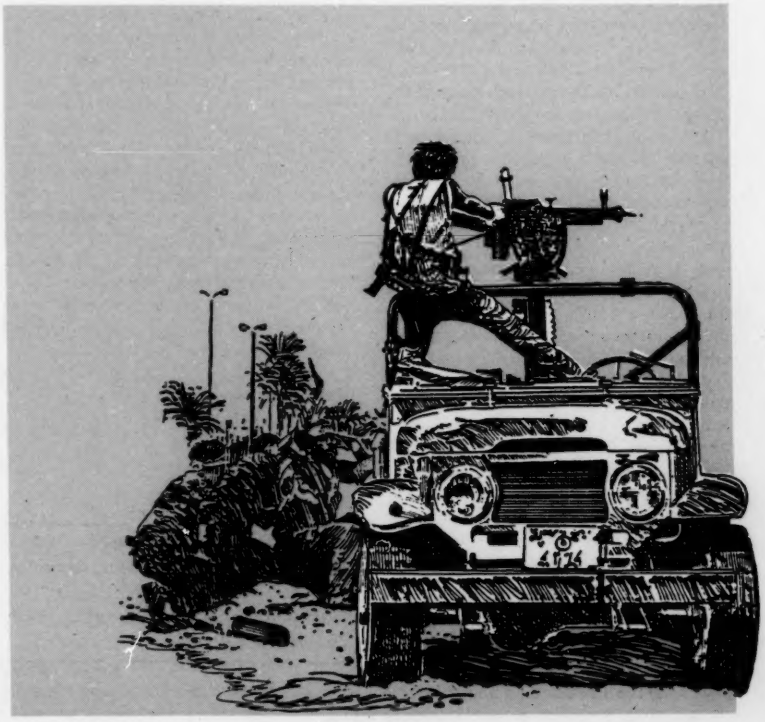
At the end of the U.S. involvement in South Vietnam the riverine force's successes had given Saigon control of the most vital single area for a viable, postwar South Vietnam government, the Mekong Delta. Riverine forces provided some areas the only real prospect of long-term security. As a result of these operations, the North was visibly losing the war and prosperity was apparent for the citizens protected by the riverine campaign.

Assigned unfamiliar missions, the Navy and the Army found that they could prevail on their respective battlefields. This was possible through the adaptability and open-mindedness of their personnel. The very nature of these two types of combat required that they be fought with small teams in brief, vicious firefights. Above all, success was attributable to the bravery and fortitude of individuals at the battle's forefront. The most junior officer and enlisted ranks were compelled to assume heavy responsibilities. Operating with near-complete autonomy, they successfully and eagerly performed difficult and delicate missions. This important lesson, often learned at the cost of American lives, seems regrettably lost in a peacetime force structure.

William S. Wojsko
Fort Huachuca, Ariz.

Emerging Powers: Defense and Security in the Third World, edited by Rodney W. Jones and Steven A Hildreth, New York: Praeger Publishers, 1986, 436 pages, $45.00.

This book is an outgrowth of a study on the "Future of Conflict" done at the Georgetown Univ. Center for Strategic and International Studies. It consists of a series of case studies of what the editors consider regional powers. These range from the People's Republic of China to Nigeria to Mexico. Of the 10 cases studied, five focus on Asian



powers, three on Latin American and one each for the Middle East and Africa. While one might disagree with the choice of countries, it is the structure of the study itself which deserves attention.

As the editors explain in their introductory chapter, the authors of the case studies were asked to structure them around four basic considerations. First, the national ambitions of each country were examined. The People's Republic of China, for example, is described as desiring to become "a modern and powerful socialist country, which is prosperous, highly democratic and culturally advanced." It is from this perspective that the PRC's growth in power is examined.

Secondly, these case studies focus on threat perceptions, both internal and external. Indonesia is presented as viewing its threat to be principally internal. The government of Gen. Soeharto uses these threats to maintain its power and hold back the growth of democratic ideals. The Republic of Korea focuses almost entirely on the external threat of North Korea. This leads to a desire to retain U.S. support and serves as a check on the growth in ROK power.

The third area of consideration is that of defense problems and strategic responses. From this reader's standpoint, this held the promise of being the most interesting part of each case study. It is, after all, often the process of finding solutions to problems which can lead to conflict. Unfortunately, the case studies tend to fall flat in this area. Too much focus is given to the problems of weapons procurement and the possibility of the spread of chemical, biological and nuclear weapons. Little or no attention is paid to the possible consequences of the spread of these weapons.

The final consideration in each case study is that of the impact on regional and international behavior and implications for U.S. security policy. While the discussions of effects on regional behavior are interesting and informative, those dealing with U.S. security policy tend to be too brief. Only passing mention is made of the Nixon doctrine policy of assisting individual countries to defend themselves. The introductory chapter seemed to promise more than this.

While these case studies ultimately fail in their stated objectives, the study framework is ambitious and has the potential for further development. The case studies were originally used as material for a 1983 CSIS-sponsored conference (Modern Weapons: Third World Motivations, Capabilities and Performance). This may explain their slightly skewed analysis. The findings of that conference were published in an earlier work by the same editors, **Modern Weapons and Third World Powers**, Boulder, Colo.: Westview Press, 1984. For those interested in a theoretical discussion of rising regional power and the future of the spread of modern weapons, this is an excellent primer. **Emerging Powers** does offer several well-written case studies for those interested in putting the study framework to use.

Thomas M. Strong
Bowie, Md.

Zones of Conflict: An Atlas of Future Wars by John Keegan and Andrew Wheatcroft, New York: Simon and Schuster, 1986, 158 pages, $10.95.

This book is a survey of the world's "trouble spots" — those places where conflict is present and there exists potential for an outbreak of hostilities or a broadening of the conflict. It will appeal to anyone interested in current events, political science and political geography. The writing is informative and to the point. Judgments as to "right" and "wrong" are avoided. The maps are very well done, considering the low price, and should be of use following the news.

Keegan and Wheatcroft begin in Europe with an analysis of zones where "east" and "west" have contact. The various NATO "fronts" are examined. Problems each force will encounter, especially those forces of NATO, are explained. From Europe the reader is carried through the Middle East, Southeast Asia, the Far East, Africa and eventually to the Americas. (Interestingly, "space" is listed under the Americas.)

There are a few problems. It took several minutes to discover what the IGB (International German Border) was. One can expect military writers to dump initials on a reader, but not academic people. Some military dispositions are simply pennants or figures on the maps. One doesn't know whether they're divisions or guard houses. It's rather distracting. Libya is seen only as a threat in the Sahara. Areas where ethnic minorities are a problem are not seen as trouble areas, unless major third parties are actively involved. These minor points shouldn't keep someone from looking at and keeping this book handy.

Peter C. Unsinger
San Jose State University

Sheathing the Sword - The Demilitarization of Postwar Japan by Meirion and Susie Harries, New York: MacMillan Publishing Company, 1987, 364 pages, $22.50.

This book's core centers around the conspiracy to initiate war and criminal activities by the Japanese military during World War II, and the impact of the U.S. demilitarization program as part of the occupation policy during the years 1945-1952.

It was after the Japanese surrendered in September 1945 that a coordinated effort to "sheath the sword" took place. The victorious Allied powers attempted to carry out in Japan what they did in Germany under the auspices of the "denazification program." They even created a Nuremberg-type tribunal for the trial of Japanese wartime leaders accused of war crimes. This Japanese counterpart for Nuremberg was named the International Military Tribunal for the Far East (IMTFE). The IMTFE was one of the key instruments for Gen. Douglas MacArthur's policy of purging the influence of militarism from Japanese society. The authors' intent is to show the demilitarization policies were flawed due to unrealistic expectations coupled with a superficial understanding of Japan's history and culture. In fact, the authors imply that demilitarization never really took hold in Japan except for the cosmetics (purging of the prewar military/police establishment, de-deification of the Emperor as a living God, elimination of secret military societies and the Japanese military intelligence organization).

In addition, the authors discuss the role of Japan's key industries in fueling the Japanese war machine before and during the war and the fact that these same companies (Nissan and Mitsubishi, to name two) presently have an enormous impact on the United States and other nations of the world.

However, the authors state that the onset of the Cold War between the United States and Soviet Union forever put the demilitarization policies of the Allies on hold. The onset of the Cold War was also seen as the period when Japan began to reestablish its world influence in terms of intense economic, business and financial development. These domestic developments, according to the authors, were a smoke screen for the reestablishment of Japan's military forces. There is a large amount of material devoted to the development of the present self-defense forces, their purposes, and comparisons and motivations of the leadership (political and military) of the present government of Japan. The authors present a good case of looking at the demilitarization policies instituted in Japan and the causal factors that ultimately killed the Allied demilitarization efforts as seen from both Japanese and U.S. political and military perspectives.

Michael S. Evancevich
Fort Huachuca, Ariz.

The Pride and the Fall by Corelli Barnett, New York: The Free Press, Inc., 1987, 359 pages, $22.95.

Since World War II the international scene has been characterized by tremendous economic, political and social changes. Yet, if one takes the time to carefully analyze certain facts, many of these changes should not be too surprising. Perhaps this is the reason why history is such an excellent teacher. It helps us learn from our mistakes so we can hopefully avoid them in the future.

This book is concerned with Great Britain during World War II — a time when the country was subjected to severe stress. Although Britain was victorious, the country is shown as being exceedingly weak during the war and lacking the foresight to implement desperately needed changes after the war. In addition, its performance during the war is shown as depending heavily on help from the United States. Great Britain's victory is pictured as another of the ironies of history. After Germany and Japan were defeated they went on to surpass Britain during the postwar period in industrial production. Britain, which had been one of the "big three," has declined to 14th in world power.

The author's purpose is to document the causes of Great Britain's decline as a world power. For example, it is obvious that Britain was blinded by the glory of past accomplishments and did not realize the importance of making drastic changes in the area of technological innovation. This led to a failure to modernize her industry. She thus became dependent on other sources. Another major contributing factor seemed to be a failure to educate and train the British people so that they could perform in a competitive, technology-oriented society. In combination, these and other factors helped lead Britain to productive inferiority in comparison to other countries after the war.

It is obvious that much research was necessary to write this book. Some of the sources used by the author include numerous government documents such as command papers, minutes and memoranda of various committees, and other public reports. The style of writing is such that the book will probably not appeal to the layman. It appears to be written more for the professional who desires an understanding of the factors that led to Great Britain's downfall. Although the primary scope of this book is focused on Britain during World War II, the author alludes regularly to the prewar and postwar periods. This may have been necessary so that the reader will be better able to understand the ramifications of what occurred in Britain during World War II.

Important lessons are to be learned from reading this book. For example, there is a relationship between industrial strength and international power. If a nation is to be a major world power it must have a strong industrial base. It is also obvious that the industrial strength of a nation is influenced by political leaders. If these political leaders do not realize the value of industrial strength to a nation, serious economic, political and social problems may come about. Perhaps the most important lesson of this book is the realization that even though today a nation is deemed to be a major world power, it may lose that position within a short period of time.

Dr. William E. Kelly
Auburn Univ.

General A.P. Hill, The Story of a Confederate Warrior by James I. Robertson Jr., New York: Random House, 1987, $24.95.

Why should a Military Intelligence professional spend his valuable time reading a good but certainly not great book about a good but hardly great Civil War general? Apart from a personal interest in the subject there are two sound reasons. First, our Civil War, not our Revolutionary period, remains the crucible of the United States as we know it, as well as providing the most unsparing mirror of our patterns of military behavior. We read of the War Between the States and, if we are honest and alert, we find ourselves in those faded uniforms of blue, butternut and gray. Second, Ambrose Powell (A.P.) Hill is a splendid officer to study if you want to size up the archetype of today's U.S. Army officer.

Hill, a first lieutenant in the U.S. Army when the Civil War began, received an appointment as a colonel in Virginia's initial contribution to the Southern cause. He performed quite well as a tactical commander through division level and, upon his assumption of the command of a corps between Chancellorsville and Gettysburg, found himself a man with a mission to which he could not ever fully rise. He was, above all, a fighter. Given a clear-cut mission, he would execute vigorously. He always sought to hit the enemy wherever he found him. He was dedicated, brave and capable, within limits. But he was confused by mission-type orders. He possessed no incisive feel for the peculiar nature of the evolving contemporary battlefield, and he had no intellectual subtlety. While few officers might outfight "Little Powell" Hill, he could be out-thought. His impatience and itch for a fight repeatedly killed his men unnecessarily and almost brought disaster upon the Army of Northern Virginia. He was companionable to and concerned about his officers and men. But, he did not trouble himself to think about war. Hill "shot from the hip," and when he missed, the effects were tragic upon those soldiers whom he believed he loved. Swerving between anxiousness and lapses into inattentive, dilatory behavior, the example of Hill rings true for those of us who have come to know the mold of our contemporaries. Hill was even a "modern" in that he grossly underestimated the importance of intelligence or even fundamental reconnaissance. Again and again, at Mechanicsville, at Gettysburg, at Bristoe Station and elsewhere, Hill sacrificed his men in bold, dashing, uninformed, blood-soaked attacks.

This is a cleanly-written, well-researched book: a good weekend read. The author is thoroughly knowledgeable and at home with his material, and his style is extremely readable. While his somewhat addled and inaccurate account of the first day at Gettysburg is a low point of the book, that particular series of swirling combats is admittedly tough to sort out from the available records. Many regimental and brigade accounts seem to describe totally different engagements, even though the units fought side by side or face to face. Robertson is primarily an authority on the Virginia battles, and on those he is quite good. His account of the often-overlooked battles incidental to the expanding siege of Petersburg is a fine one, if noticeably partisan to the Confederates.

One special thing this author does extremely well is to incorporate the human factor into combat. Hill grew ever more seriously ill as the war progressed, and the effect of his physical problems comes through so clearly that we have an almost visceral sympathy with this sick, aching soldier climbing back into his saddle yet again. Further, the armies of the Civil War —especially the Confederate armies — were fatefully subject to the accidents of personal relations between ranking officers. The author helps us grasp the sort of problems any commander faces with troublesome, but talented, subordinates when he writes of Hill's feuding with James Longstreet and of his personality conflict with "Stonewall" Jackson.

Robert E. Lee sincerely liked Hill, and he was comfortable in his presence. Lee trusted Hill. Perhaps because Lee was a good enough judge of men he recognized Hill's limits. Hill was a direct opposite of Jackson, who performed best in independent commands and abysmally when restricted by a detailed higher plan. Hill was the dogged subordinate who would keep on trying to succeed at his assigned task and who would often use great skill and good instincts in doing so. When Hill fell to a Yankee bullet in the final weeks of the war, it was a severe blow to Lee and the South. After the war, Hill never became a cult fig-

ure, as did Lee, Jackson and Stuart. But he is always there in the good histories of battles and campaigns, coming up in time at Antietam, hanging on for dear life with no reserves in the Wilderness, and leading last, desperate efforts to hold back the bluecoats on the road and rail lines south of Petersburg. His story is a solid, thoroughly human saga, from an unlucky incident during his West Point years to the bitter days when sickness was aggravated by the specter of military hopelessness. It is a story well told in this book.

Capt. Ralph Peters
III Corps
Fort Hood, Texas

The 1985-1986 American Defense Annual, edited by George E. Hudson and Joseph Kruzel, Lexington, Mass.: D.C. Heath and Company, 1985, 291 pages, $32.00.

This book gives the reader a broad perspective on U.S. defense policies. The foreword, written by Alexander George, states that the goal of the Annual is to focus the debate on U.S. defense policy instead of the defense budget. The book clearly accomplishes this. Mr. George also acknowledges a possible bias among the contributors, stating they are "moderates on defense issues." The implication is that all recognize detente is a failure and that buildup of Soviet forces is a significant threat to U.S. interests. This moderate bias, however, does not prevent their criticism of the Reagan administration.

The book has two recurring themes. The first is a discourse on the insignificant policy differences between the Reagan and Carter administrations. The contrast between the two is how much money each spent to achieve their military and foreign policy objectives. The second theme involves the debate between former Secretary of Defense Caspar Weinberger and Secretary of State George Shultz on what circumstances should exist to justify the use of force to achieve foreign policy intentions. Weinberger argued that, to justify intervention, a direct threat must exist to U.S. interests. Shultz argued that, even if a clearly defined criteria has not been established or met or the circumstances are unclear, force is a legitimate policy tool.

The book applies the principles of the Weinberger-Shultz debate to broader defense issues and focuses on the lack of a clearly defined defense policy. So, even with the obvious moderate bias, none of the authors blindly defend administration policies. What they do is give the Reagan administration credit for the increase in defense spending, but none support the view that spending increases alone equate to clear policies.

Various individual chapters represent the book's tone. The opening chapter, written by the editors, explores the Weinberger/Shultz debate and sets the stage for the following chapters on specific issues by providing a broad overview of recent defense policy. To a degree, they concur with Walter Mondale's criticism of the Reagan administration's throwing of "billions (of dollars) at defense without plan or priorities."

The most intellectually rewarding chapter is the second by William R. Van Cleave and Earl C. Ravenal. The authors take contrasting views on the topic of defense aims and policies. Van Cleave suggests that we need to increase defense spending to meet our broad and divergent foreign policy goals. Ravenal counters that reality dictates that neither the economy nor the public will long support increases in defense spending. Ravenal never identifies what should be different in U.S. foreign policy and thus provides Van Cleave ample room for criticism. On the other hand, Van Cleave overstates his argument for rhetorical effect, thereby detracting from his position's persuasive and logical conclusions. However, the authors have organized a well written chapter that serves as an excellent primer for students of the defense debate.

Chapter 4, written by Walter B. Slocombe, is an excellent review of strategic forces. He isolates each strategic system: bombers, submarines, ICBMs, sea-launched cruise missiles, anti-satellite weapons and general strategic defense. He then ties a neat knot at the end, explaining each weapon's relationship to each other and overall deterrence. He also includes a criticism of the Reagan administration's premise of population protection with SDI and the possible destabilizing effect this has on nuclear deterrence.

Chapter 5, by James A. Thompson and Nannette Brown, focuses on NATO and U.S. defense policy. The authors argue that "the search for new strategies (by the White House) has caused confusion regarding U.S. policy toward defense improvements in NATO." They agree that NATO wants to improve the European Allies' position, but that little consensus exists on how to accomplish this because of competing defense initiatives. One of their examples is whether NATO forces should be structured and equipped for a deep-strike role (AirLand Battle) or for operational reserves. The authors support the position of operational reserves because of the technological and political risks associated with deep strike.

Unfortunately, Thompson and Brown ignore two basic truths of the modern battlefield. First, both sides have weapons that significantly extend the depth of the battlefield. Second, the authors fail to address the limited availability of maneuver room by operational reserves.

Chapter 11, by Robert Kupperman and William J. Taylor Jr., provides insight into low intensity conflict and the challenge it offers strategic planners. However, they do not clarify the force structure necessary for low-intensity warfare. They blame the traditional Army emphasis on fighting mid- to high-intensity conflicts as a detractor from concentrating efforts on the more probable involvement by U.S. forces in a low-intensity environment. I would suggest that the reason a general European war is the "least likely contingency" (their words) is because we *have* focused on Europe and, up to now, deterred the Soviets from taking military action there. The issue is how many forces should we structure to counter the low-intensity threat?

In recent years we have expanded our low-intensity capability by providing for new light divisions and increasing our special operations forces. However, the expansion comes at the expense of the heavy force since total military manning did not increase.

As the authors admit, terrorism is the toughest threat to counter and one of the most often used tools by insurgent forces. The authors hint that light divisions may not be the correct approach. The expectation of division-size units deterring terrorism is much like using a sledgehammer to kill an ant when a strategically placed thumb is more effective. As the authors argue, U.S. activities are increasingly becoming terrorist targets. Terrorists fear an ability to eliminate the planning and execution arms of their organizations. Political risks exist to this sort of policy, as the authors indicate. But, do we forsake adequate defense in Europe to experiment with inadequate forces for low-intensity conflict? Kupperman and Taylor fail to address this critical and decisive issue.

Also included in the book are chapters on the defense budget by Leonard Sullivan Jr., "Seapower and the Projection Forces" by Harlan K. Ullman and R. James Woolsey, a chapter on manpower and the quality and quantity of future military recruits by Martin Binkin, "Organization and Management" by Philip Odeen, a discussion of arms control and negotiations by Michael Krepon and Alton Frye, and a special section on SDI by Albert Carnesale.

Even with these minor disagreements, the book offers the reader insight, guided by the authors' careful judgment and analysis, into the realm of defense policy. The contributors meet the laudable goal of refocusing the issues from the budgetary process to a debate on policy objectives without ignoring the effect funding has on these decisions. I highly recommend the book to any military professional wanting greater insight into U.S. defense policy. I hope that the following Annuals will meet the high standards set forth in the first.

Capt. Lance Eldridge
Woodbridge, Va.

The coat of arms of the Defense Language Institute symbolizes the mission, goals and origins of the organization. The upper portion of the escutcheon is blue, signifying the peacetime mission. The shield is charged with a symbolic representation of the Rosetta Stone which gave scholars the first clues to the meaning of Egyptian hieroglyphics. The Rosetta Stone symbolizes the significance of language as the chief instrument for the attainment of understanding with other nations of the world.

The lower portion of the shield is red representing the wartime mission of the school. This portion is charged with the helmet of San Carlos Catalan Volunteers, Spanish troops attached to the expedition which founded the Presidio of Monterey in 1770. The helmet symbolizes the military aspects and rich historical character of the Defense Language Institute, Presidio of Monterey.

An olive branch of green emblazons the bend or diagonal division of the shield. The olive branch is symbolic of the Institute's Motto, "Language Power for Peace." The crest of the shield is a gold torch, the traditional emblem of learning and knowledge.

Defense Language Institute

The Defense Language Institute (DLI) is a Department of Defense school located on the Presidio of Monterey, overlooking the bay in Monterey, California. It has 40 language departments. The largest departments at the present time are Russian, German, Arabic, Spanish and Korean.

Basic courses in the less difficult languages are 25 weeks long. The more difficult languages, such as Korean and Arabic, require basic courses of 47 weeks.

Nearly every faculty member is a native speaker of the language he or she teaches. In addition, there are Foreign Language Training Noncommissioned Officers (FLTN) who act as teaching assistants. The FLTNs are native speakers of English and have proficiencies in foreign languages.

To enhance knowledge and understanding of foreign cultures, the course work also covers value systems, behavior patterns, institutions, geography and political, economic and social systems.

Most of the jobs that require foreign language skills are in military intelligence specialties. Approximately half of first assignments for active duty enlistments are to overseas locations.

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